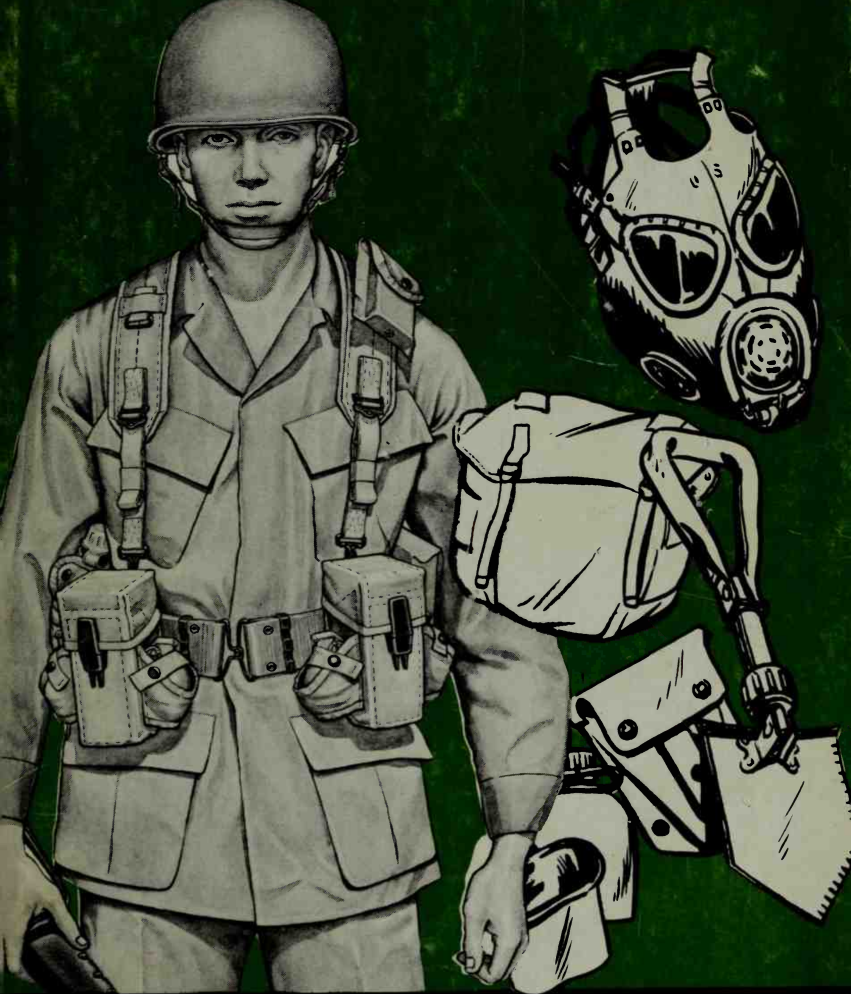
FM 21-15



CARE AND USE OF INDIVIDUAL CLOTHING AND EQUIPMENT

FIELD MANUAL
NO. 21-15

FM 21-15*

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 15 February 1977

CARE AND USE OF INDIVIDUAL CLOTHING AND EQUIPMENT

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**This manual supersedes FM 21-15, 28 August 1972, including all changes.*

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CHAPTER 1

INTRODUCTION

Purpose and Scope

● *This manual is a guide for enlisted personnel for the use, care, and maintenance of the clothing and equipment issued or sold for personal use.*

The manual includes general instructions for cleaning, pressing, mending, and storing items of the uniform. Uses of bivouac equipment such as the shelter half, sleeping bag, and poncho are discussed as well as the methods of assembling, packing, and using load-carrying equipment. The use and care of various items of field equipment issued to you for special purposes or missions are also discussed. General information, with references for specific information, is included on clothing you may use in arctic, tropical, and other special environments.

Appendix B provides information on the composition of the various uniforms you will wear. The way you wear your uniform and when you wear your uniform are described in *AR 670-5* and *AR 670-30.*

Instructions for fitting your uniform are in *TM 10-227* and *TM 10-229,* which describe the Army-accepted "concept of fit." Instructions for the display of your clothing and equipment for inspection are given in *FM 21-13.*

Changes

The information, procedures, and equipment described in this manual are current at the time of preparation. Changes in equipment will require changes or revision of the material presented.

Field experience may also suggest changes. You are encouraged to submit recommended changes and comments to improve it. Make sure you key your comments to the **exact page, paragraph, and line of the text** in which the change is recommended. Provide reasons for each comment to insure understanding and complete evaluation.

Submit your comments on DA Form 2028 (Recommended Changes to Publications) or by letter and forward it direct to—

Commandant
US Army Quartermaster School
ATTN: ATSM-TD-TL
Fort Lee, Virginia 23801.

CHAPTER 2

GENERAL CARE AND MAINTENANCE

Clothing

You are responsible for keeping your clothing in good serviceable condition. *No matter how well your uniform fits, it will not continue to look its best unless it is kept clean, kept in good repair, and stored properly.* Proper personal care while you are wearing your uniform is important. For example, if you carry large or heavy articles in your pockets, the tailored-in shape of your clothing will be destroyed quickly. You should follow closely the cleaning and care instructions that are attached to most garments. In many cases the label will also tell you what not to do.

● *Cleaning.*

Clean clothing regularly when it is in use. Dirty clothing wears out quickly because dirt cuts textile fibers and retains moisture from perspiration.

When you clean clothing—

- Wash cotton clothing, such as shirts, trousers, and socks, with soap or detergent and hot water. **Do not starch.**
- Wash untailored wool clothing, such as socks and glove inserts, in mild soap, or detergent, and lukewarm or cool water. **Never use hot or boiling water.** Stretch the items into shape while drying.
- Have tailored wool clothing, such as wool jackets and trousers drycleaned. **Do not wash;** washing damages the tailored features.
- Spotclean clothing soiled or spotted by small stains. Remove stains or soil as soon as possible because the longer they remain, the harder they will be to remove. When removing stains, start at the center of the stain, and brush out toward the edges, decreasing the pressure. Instructions for removing various types of stains are shown on the next page. *Appendix D* gives detailed instructions for removing stains from washable and nonwashable fabrics using, at times, items you can get only on a commercial basis.

PROCEDURES FOR STAIN REMOVAL

Type of stain	Procedure for cotton fabric
GRAVY	Rub stain with cold water; then place a pad or cloth underneath fabric to absorb stain, and rub stain with cleaning fluid. If any stain remains, dry the fabric and rub with a soap or detergent solution. **Do not rub excessively**, as this may damage the finish of the garment.
FOOD	Dampen stained area with water. Apply soap or detergent solution D (with ammonia, if available), tamp with brush, and flush with water.
MILK	Same as procedure for food stain.
FRUIT OR FRUIT JUICE	Use hot water and wash stain while still moist.
GREASE OR OIL	Scrape off top of stain, then saturate stained area with cleaning fluid, tamp with brush, and flush out with cleaning fluid.

PROCEDURES FOR STAIN REMOVAL

(CONTINUED)

Procedure for wool fabric	Procedure for synthetic fabric
Same as procedure for cotton fabric.	Sponge with cold or lukewarm water. If grease spot remains, launder washable materials in a soap or detergent solution, using warm water. **Do not rub material.**
Same as procedure for cotton fabric.	Same as procedure for gravy.
Same as procedure for cotton fabric.	Same as procedure for gravy.
Flush stained area with lukewarm water. Apply soap or detergent solution, tamp with brush, and flush out with water. (If available, apply lemon juice or vinegar, and flush thoroughly with water.)	Same as procedure for gravy.
Same as procedure for cotton fabric.	Scrape off top of stain. Launder washable materials in a soap or detergent solution, using warm water. **Do not rub material.**

PROCEDURES FOR STAIN REMOVAL

Type of stain	Procedure for cotton fabric
BLOOD	Flush and rub stained area with cold water; then wash stain with soap or detergent solution.
BLOOD (DRIED)	Scrape off top of stain. Dampen stained area with cold water, apply soap or detergent solution (with ammonia if available), tamp with brush, and flush with water.

PROCEDURES FOR STAIN REMOVAL
(CONTINUED)

Procedure for wool fabric	Procedure for synthetic fabric
Dampen stained area with water. Apply soap or synthetic detergent solution (with ammonia if available), tamp with brush, and flush with water.	Flush stained area with lukewarm or cold water, then using warm water, wash stain with a soap or detergent solution. If stain remains, sponge with hydrogen peroxide.
Same as procedure for cotton fabric.	Scrape off top of stain. Flush stained area with lukewarm or cold water; then using warm water, wash stain with a soap or detergent solution. If stain remains, sponge with hydrogen peroxide. (Do not use hydrogen peroxide or bleach on colored material.)

- **Do not machine wash, machine dry, hot press, or hot iron coated fabric items.**

Wipe coated clothing, such as ponchos and raincoats, with a clean cloth, shampoo by hand with a soft bristle brush using warm water and a mild soap or detergent, rinse thoroughly, and hang until completely air dried. **Do not use cleaning fluid or bleach on coated fabrics.**

- Wash synthetic fabric clothing such as stretch-type socks and stockings in mild soap or detergent, using lukewarm water.

- Wash outer water-repellent garments by hand or machine. Rinse items thoroughly, but do not starch them. Restore water repellency by re-treating with the standard water-repellent compound.

● *Pressing.*

Press clothing after it has been cleaned and all spots removed. *Do not press dirty clothing.*

When you press clothing—

- Make sure the iron is not too hot; make sure the temperature settings on the iron is set for the type of clothing being pressed.

- Hand-iron fabrics containing polyester fibers with the dial temperature on the iron set at the bottom of the "synthetic" position.

- Use a damp cloth between the iron and the fabric when pressing wool clothing.
- Dampen the surface of cotton clothing, and apply the iron directly to it.

● *Storing.*

When you store clothing—

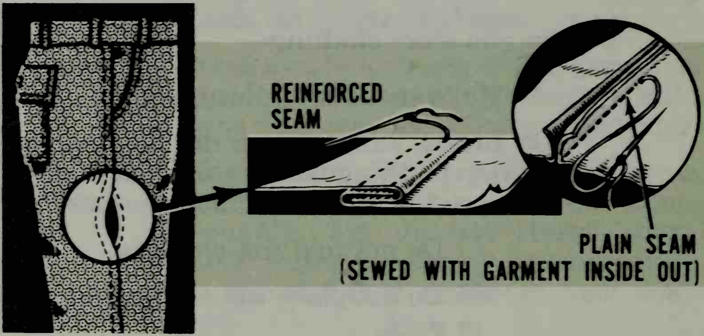
- Make sure the clothing is clean.
- Brush, sun, and air-dry all wool and cotton clothing before storing it so that it does not mildew in humid weather.
  - ☐ Do not fold wet clothing.
  - ☐ Do not place wet clothing in a bag or pack.
- Use naphthalene or mothballs to protect wool clothing in storage. To be effective, the clothing and naphthalene or mothballs must be in a closed container, not on an open shelf.
- Make sure coated clothing is cool and dry before folding it for storage. When possible, fold so that a coated side will be against an uncoated side to avoid sticking. When packing coated clothing, make sure it does not come in contact with sharp objects that may cause rips or tears. When possible, dust coated clothing with talcum before storing.

● *Repairing.*

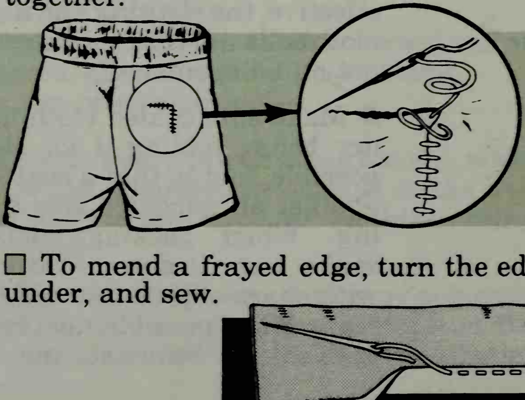
Repair holes and tears in your clothing as soon as possible. To do this, proceed as follows:

■ Rips and tears.

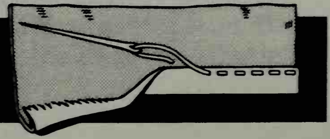
☐ To mend a ripped seam, place the two edges together and sew; keep the stitches small and in line with those already made.


REINFORCED SEAM
PLAIN SEAM (SEWED WITH GARMENT INSIDE OUT)

☐ To mend a tear, place the two edges on the wrong side, (or inside) and sew together.



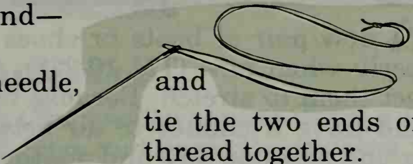
☐ To mend a frayed edge, turn the edge under, and sew.



■ **Buttons.**

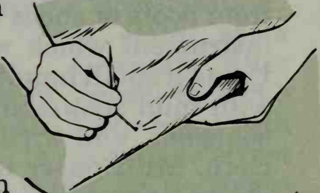
☐ To replace buttons, refer to the illustration, and—

1– Thread a needle, and tie the two ends of the thread together.

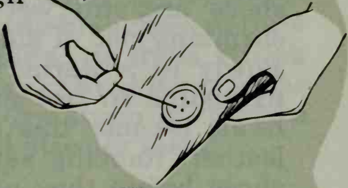


Note: You may double the thread and tie the four ends together, if you wish. This requires less passes through the material.

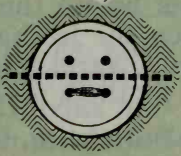
2–Put the needle through the cloth from the inside, and stitch several times to anchor the end of the thread.

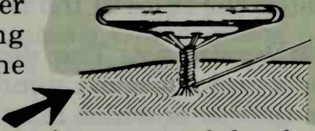


3–Put the needle through one of the holes in the button, and let the button slide down the thread.



4– Stitch through the cloth and the holes in the button, first through the holes on one side and then through those on the other. Hold the button out from the cloth or place a matchstick under the button while sewing to prevent strain on the cloth .





5–After sewing, wrap a few turns of the thread around the stitches between the button and the cloth, and stitch through the wrapped thread a number of times. To finish up, lock the stitches with a knot made on the inside of the cloth.

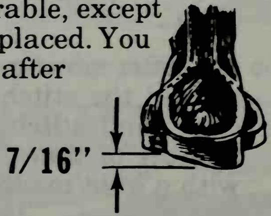
BOOTS, SHOES, AND INSOLES

A new pair of boots or shoes should fit you properly when new (TM 10-228); you should not expect them to stretch. Because boots and shoes should have a chance to air between wearings, wear one pair one day and another pair the next. Wear the ventilating plastic insoles so that air can circulate underneath your feet.

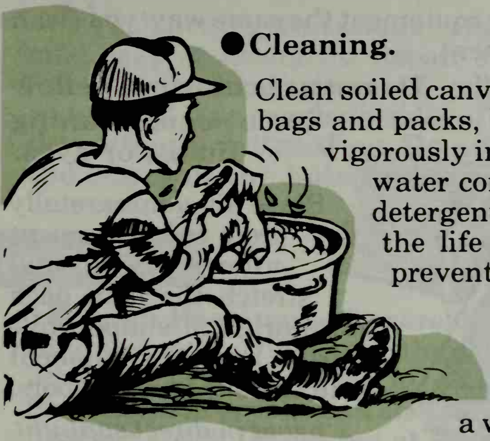
●**Cleaning and Drying.** Scrape dirt or mud from boots or shoes with a flat stick, brush, or dull instrument which will not cut leather or rubber. Using a small handbrush, wash the boots or shoes with mild soap and very little water. Remove all soapsuds, and wipe the insides dry with a clean cloth. Stuff paper in the toes while the boots or shoes are still wet to keep the leather from shrinking out of shape. Dry the boots or shoes slowly in a warm, dry place. **Do not dry by exposure to hot sun, fire, or other strong heat,** because this may damage the rubber or leather. Rubbing saddle soap into the boots or shoes before they are completely dry will help soften the leather. Wash the ventilating insoles with a warm solution of mild soap or detergent, and let them air-dry. **Do not boil the insole.**

●**Polishing.** Use only stains and polishes that match the color of the boots or shoes.

●**Repairing.** The direct molded sole (DMS) boots and shoes are nonrepairable, except for the heels, which may be replaced. You should have the heels replaced after wear of seven-sixteenths of an inch or more.



CANVAS EQUIPMENT



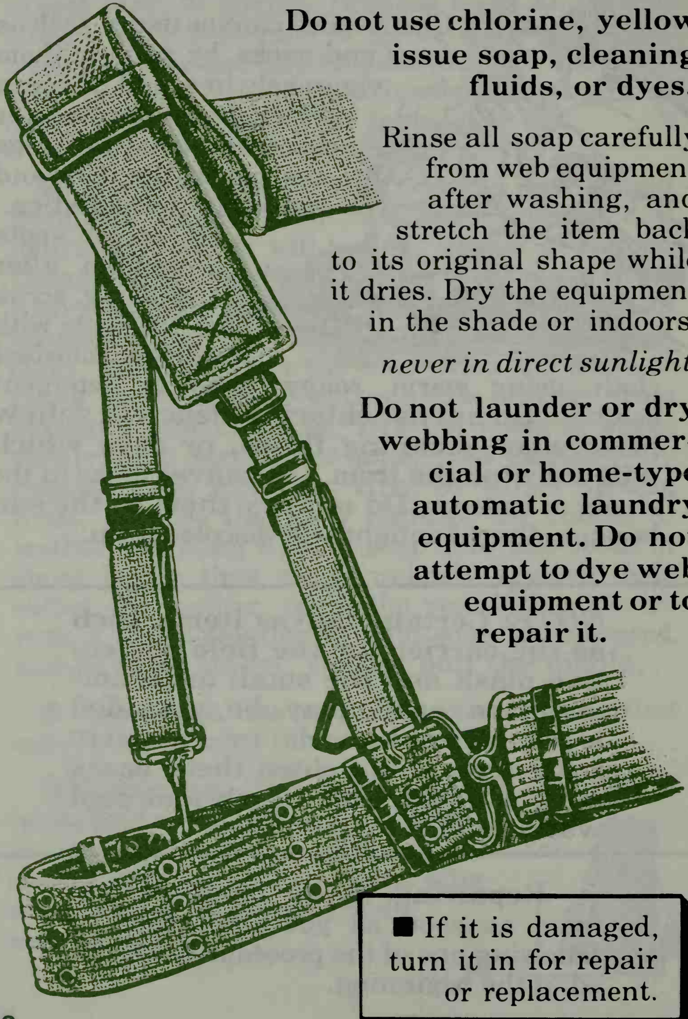
● **Cleaning.** Clean soiled canvas items, such as bags and packs, by dipping them vigorously in a pail of warm water containing soap or detergent. This prolongs the life of the item and prevents discoloration. If soiled spots remain after washing, scrub the spots with a white or colorfast cloth, using warm, soapy water or detergent solution. **Do not use chlorine bleaches, yellow issue soap, cleaning fluids, or dyes which will discolor the item.** Dry canvas items in the shade or indoors. **Do not dry them in the sun** because direct sunlight will discolor them.

NOTE: **Certain canvas items, such as the carrier for the field protective mask and the small arms ammunition case, may be provided with fiberboard or plastic stiffeners. If so, clean these cases with a damp, soft brush and cool water only.**

Repairing. Repair small rips and tears as soon as you find them by following one of the procedures described at the beginning.

WEB EQUIPMENT

Clean web equipment the same way you clean canvas equipment.



Do not use chlorine, yellow issue soap, cleaning fluids, or dyes.

Rinse all soap carefully from web equipment after washing, and stretch the item back to its original shape while it dries. Dry the equipment in the shade or indoors; *never in direct sunlight.*

Do not launder or dry webbing in commercial or home-type automatic laundry equipment. Do not attempt to dye web equipment or to repair it.

■ If it is damaged, turn it in for repair or replacement.

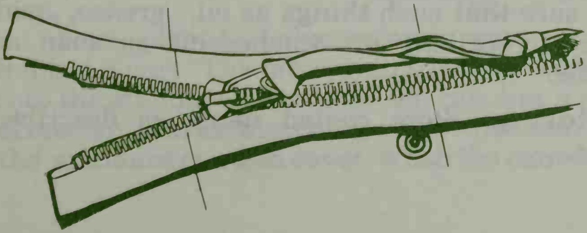
NETTING

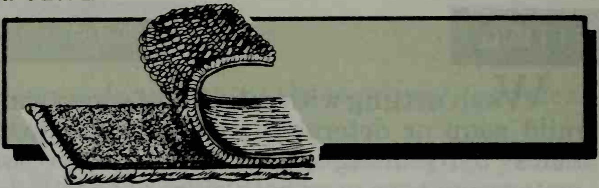
Wash netting with solution of warm water and mild soap or detergent. Repair small tears and holes by placing pieces of adhesive tape or waterproof tape over both sides of each hole while the netting is flattened out. **Do not draw and tie the edges of the hole together, except in an emergency.**

FASTENERS

● **Snap Fasteners.** Be careful when you open snap fasteners. Place your thumb and forefinger between the two layers of cloth close to the fastener, then pry the ball and socket halves of the fastener apart. Do not tug at the cloth.

● **Slide Fasteners.** Even though slide fasteners (zippers) are of sturdy construction, they must be used *carefully.* When a slide fastener snags, do not yank or tug at it. Check the fastener; if a fold of fabric is pinched between the two halves of the track, unzip the fastener about an inch, smooth out the fabric, and try again. When the slide fastener works stiffly, rub a thin coating of wax or lead-pencil graphite on each side of the track, and work the fastener back and forth a few times. The wax or graphite will lubricate the fastener and allow it to open and close more easily. Close the fastener before washing the garment.





●**Hook-and-Pile Fasteners.** The hook-and-pile fastener is used as a closure for equipment and clothing. It is made up of two sections of tape. One section contains many small nylon hooks; the other section is a woven pile with many small nylon loops. When the two sections are pressed together, the loops on the pile tape are engaged by the hooks on the hook tape, resulting in a tight closure. The closure is opened by firmly pulling one tape section from the other. Clean the fastener by washing or brushing, as necessary.

COATED ITEMS

●Cleaning

Do not machine wash, machine dry, hot-press, or hot iron coated items.

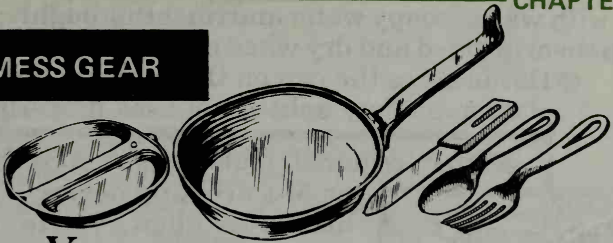
Wipe soiled coated items with a clean cloth, shampoo by hand with a soft bristle brush using warm water and a mild soap or synthetic detergent, and rinse thoroughly. Air-dry the items;

do not use direct heat as it will cause coated material to dry out and crack.

Make sure that such things as oil, grease, acid, or insect repellent are washed off as soon as possible.

Storing. Store coated items as described earlier.

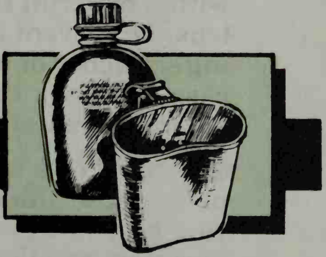
MESS GEAR



Your mess gear consists of the *messkit pan and the field mess knife, fork, and spoon.* Before using your mess gear, clean and dip it in boiling water for at least 3 seconds. **Eating with mess gear on which grease or food particles have been left may cause serious illness or make the food less appetizing.** After eating, food particles should be completely scraped off as soon as possible.

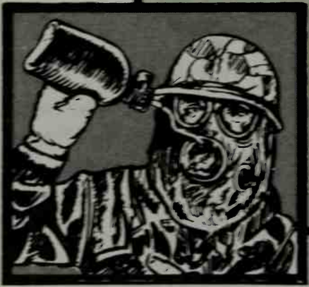
Clean mess gear by dipping it in a hot soap, detergent, or hand dishwashing solution (130°F). Use a brush, if you have one, to wash off food or grease; rinse thoroughly for about 30 seconds in clean boiling water. Air-dry the gear by swinging it back and forth until it is thoroughly dry. *Never wipe mess gear with a cloth or towel.*

CANTEEN AND CUP

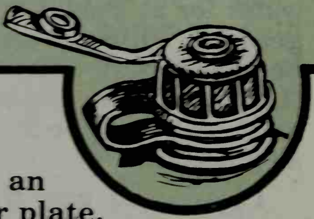


Your plastic (polyethylene) water canteen holds 1 quart. The olive-drab canteen, which fits into the standard metal canteen cup, has a plastic screwcap with an attaching strap and is carried in the standard canteen cover. Wash the canteen and cup with warm, soapy water and rinse thoroughly; keep them drained and dry when not in use.

- Do not force the cap on the canteen; the plastic cap may split if not used properly.



When required, replace the cap with the M-1 drinking device; this device allows you to drink water from the canteen while you are wearing a protective mask.



NOTE: **Do not put the plastic canteen near an open flame or burner plate.**

MISCELLANEOUS EQUIPMENT

■ **Sunglasses.** Wipe your sunglasses with a material that will not scratch the lens. To prevent sunglasses from becoming scratched or broken, put them in their case and pack them next to clothing or other soft material.

■ **Pocketknife.** Clean your pocketknife often. The metal carrying ring attached to it is large enough to slip over the handle of the messkit pan so that the knife can be easily sterilized in boiling water. Sharpen the knife with a sharpening stone when possible. Dry the blades after each use, and oil the hinges and springs once in a while.

CHAPTER 3

CLOTHING

Section I
GENERAL

Initial Clothing Allowance

The Army furnishes you with an initial clothing allowance consisting of prescribed items of personal-type clothing and service uniforms, with component items. The following lists the items which make up the initial clothing allowance for enlisted men and women.

Initial Clothing Allowance—Men

Item	Allowance
1. Belt, trousers, cotton webbing	2 ea
2. Boots, combat, leather, DMS	2 pr
3. Buckle, belt, brass	1 ea
4. Cap, garrison, AG-344	1 ea
5. Cap, service, wool serge, AG-44	1 ea
6. Cap, hot weather, OG-106	2 ea
7. Coat, wool serge, AG-44	1 ea
8. Coat, wool polyester, AG-344	1 ea
9. Drawers, cotton, white	6 pr
10. Duffelbag, OD	1 ea
11. Glove, inserts, wool, OG-208	2 pr
12. Gloves, shells, leather, black	1 pr
13. Handkerchiefs, cotton, white	6 ea
14. Insignia, branch of service, EP	1 ea
15. Insignia, EP, US	2 ea
16. Insignia, cap, service	1 ea
17. Necktie, wool, black, 3 1/8" width	1 ea
18. Overcoat, wool gabardine, AG-44	1 ea

Item	Allowance
19. Raincoat, cotton nylon, AG-274	1 ea
20. Shirt, short sleeve, Army tan, shade 445 (durable press)	1 ea
21. Shirt, cotton, khaki, short sleeve	2 ea
22. Shirt, cotton polyester, shade 446	3 ea
23. Shirt, shade 446 (durable press)	3 ea
24. Shirt, cotton, utility, OG-107	4 ea
25. Shoes, dress, black, oxford	1 pr
26. Socks, cotton/nylon, black	3 pr
27. Socks, cushion sole, OG-408	5 pr
28. Towel, bath, white	2 ea
29. Trousers, Army tan, shade 445 (durable press)	1 ea
30. Trousers, cotton khaki	2 pr
31. Trousers, wool serge, AG-44	1 pr
32. Trousers, wool polyester, AG-344	2 pr
33. Trousers, cotton, utility, OG-107	4 pr
34. Undershirt, cotton, white	6 ea

Initial Clothing Allowance—Women

Item	Allowance
1. Anklets, cotton, white	2 pr
2. Boots, combat, leather	2 pr
3. Cap, garrison, Army green cord, shade 160	2 ea
4. Cap, garrison, wool polyester, AG-344	2 ea
5. Cap, utility, AG 106	1 ea
6. Coat, Army green cord, shade 160	3 ea
7. Coat, wool serge, AG-44	1 ea
8. Coat, wool polyester, AG-344	1 ea
9. Bag, duffel, OD	1 ea
10. Glove inserts, wool, OG-208	2 pr
11. Gloves, cotton, white	1 pr
12. Gloves, dress, leather, black	1 pr
13. Gloves, shell, leather, black	1 pr
14. Handbag, black	1 ea
15. Hat, service, wool serge, AG-44	1 ea
16. Havelock, cotton polyester, AG-274	1 ea
17. Insignia, EP, US	1 ea
18. Insignia, branch of service, EP, WAC	1 ea
19. Insignia, hat, WAC	1 ea
20. Overcoat, wool, gabardine, AG-44	1 ea
21. Raincoat, cotton polyester, AG-274	1 ea
22. Scarf, white	1 ea
23. Shirt, cotton polyester, white	3 ea
24. Shirt, utility, OG-107	4 ea
25. Shoes, oxford, black	1 pr
26. Skirt Army green cord, shade 160	3 ea
27. Skirt, wool polyester, AG-344	1 ea
28. Skirt, wool serge, AG-44	1 ea
29. Slacks, utility, OG-107	4 pr
30. Socks, cushion sole, OG-408	4 pr
31. Towel, bath, white	2 ea

IDENTIFICATION MARKING

Certain items of your clothing must be clearly marked with your name and social security number. These items are listed below; *do not mark any other item.* For detailed marking instructions, see **AR 700-84.**

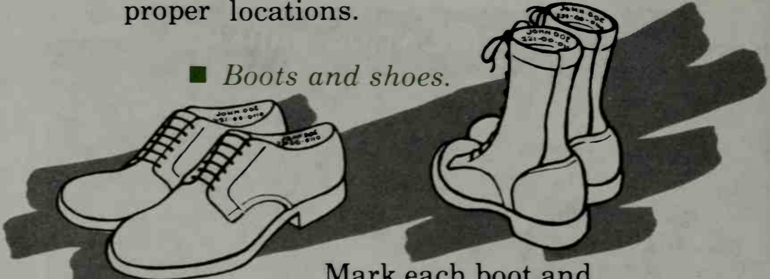
Marking Methods.

- Mark the items with stencil, pen, or rubber or metal stamp, using indelible, waterproof marking inks.
- When marking your name, use your first name, middle initial (or your first initial and middle name), and last name. Place your social security account number either after your name and on the same line with it, or beneath your name.
- For all items except the duffelbag, letters and numerals normally should be at least one-eighth inch but no more than one-half inch high. For the duffelbag, they should be at least 1 inch but no more than 2 inches high. Use both white and black marking inks, as appropriate.

● *Items Marked.*

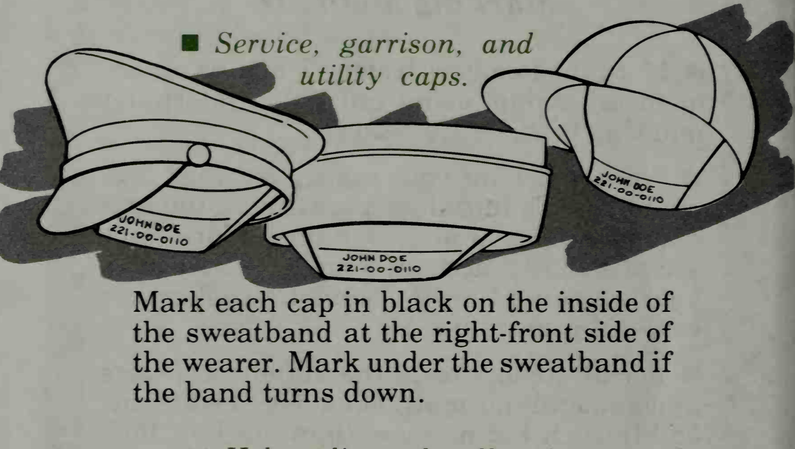
Mark the items listed below in the proper locations.

■ *Boots and shoes.*


JOHN DOE
221-00-0110
JOHN DOE
221-00-0110
JOHN DOE
221-00-0110
JOHN DOE
221-00-0110

Mark each boot and shoe in black or white as necessary on the inside right quarter, near the top.

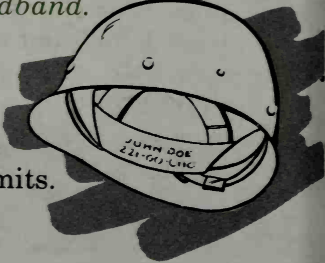
■ *Service, garrison, and utility caps.*


JOHN DOE
221-00-0110
JOHN DOE
221-00-0110
JOHN DOE
221-00-0110

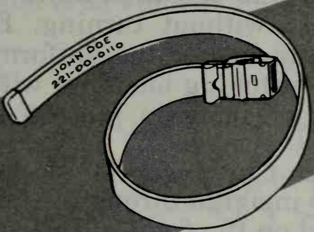
Mark each cap in black on the inside of the sweatband at the right-front side of the wearer. Mark under the sweatband if the band turns down.

■ *Helmet-liner headband.*

Mark the headband on the inside right-front of the wearer. Headbands worn by basic trainees may be marked on the right or left side, as space permits.

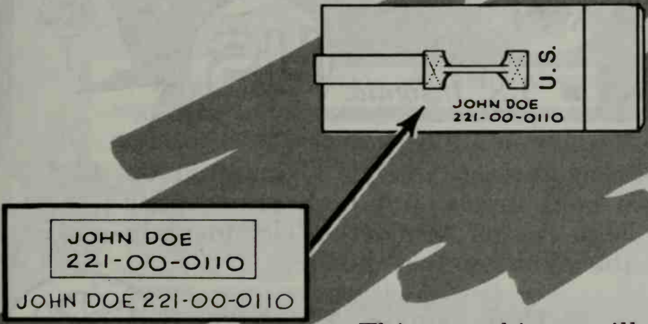

JOHN DOE
221-00-0110

- *Belts.*


JOHN DOE
221-00-0110

Mark the belts in white on the inside, about 6 inches from the metal tip.

- *Duffelbag.*

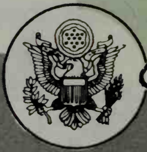

U.S.
JOHN DOE
221-00-0110
JOHN DOE
221-00-0110
JOHN DOE 221-00-0110

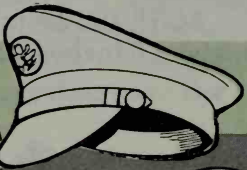
This marking will be applied by the unit to which you are assigned. The duffelbag should be placed on a flat surface, with the handle facing up and the bottom to the right. The bag should be marked in black as illustrated, making sure the last letter of the last name is even with the top of the "US" mark.

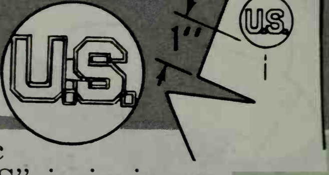
Attaching Insignia

Attach insignia to the uniform so that they will rest firmly without turning. Embroidered insignia are attached to the uniform by sewing only, with the stitching blending with the background. To attach insignia, proceed as follows:

- *Service Cap Insignia.* Secure the service cap insignia through the front eyelet provided on the front of the cap.

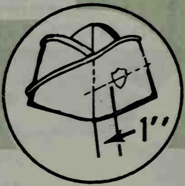






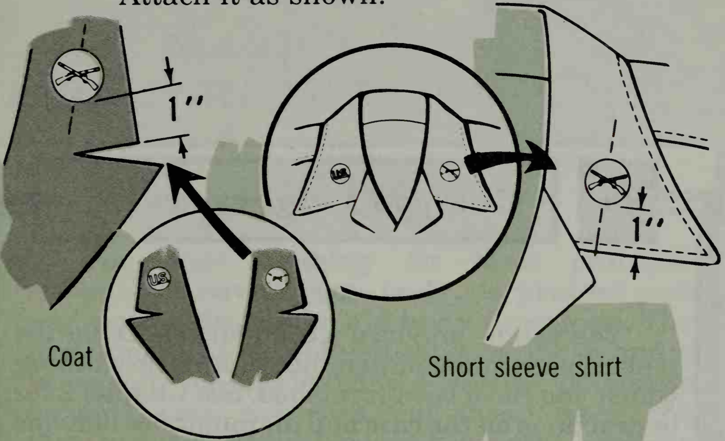
- *"US" Insignia.* While you are in basic training, attach the "US" insignia on both coat lapels and both shirt collar ends; thereafter, attach the "US" insignia on the right lapel as shown.

- *Unit Insignia.* Attach the unit insignia, when appropriate, on the garrison cap as shown.

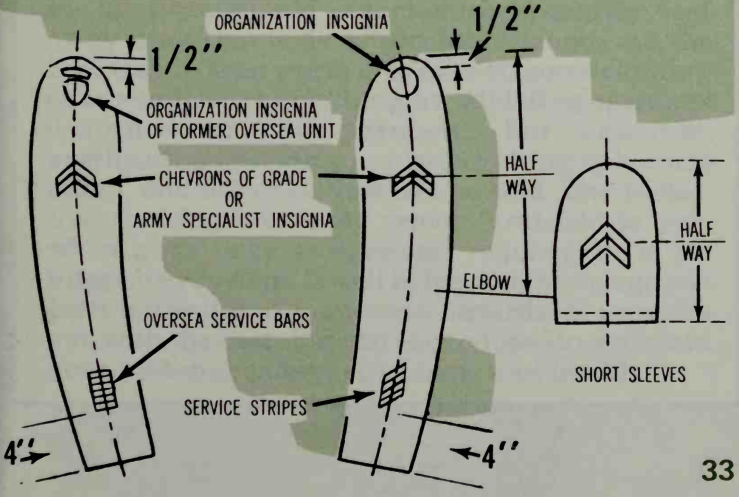


Note:
When you attach the pin-on insignia to knit uniforms, make sure you ease the pin in gently to keep from snagging or picking the cloth. Use the same hole in the cloth each time you pin on the insignia.

■ *Branch-of-Service Insignia.* After you have been assigned to a service, you will be issued the branch-of-service insignia. Attach it as shown.


1"
U.S.
1"
Coat
Short sleeve shirt

■ *Sleeve Insignia.* Attach sleeve insignia, when appropriate, on the sleeves as shown.


ORGANIZATION INSIGNIA
1/2"
1/2"
ORGANIZATION INSIGNIA OF FORMER OVERSEA UNIT
CHEVRONS OF GRADE OR ARMY SPECIALIST INSIGNIA
HALF WAY
HALF WAY
ELBOW
OVERSEA SERVICE BARS
SERVICE STRIPES
SHORT SLEEVES
4"
4"

Care and Maintenance

You will be provided a cash allowance for the replacement and maintenance of uniform clothing which you have been furnished. See Chapter 2 for instructions on the care and maintenance of items of the initial clothing allowance.

Section II

PROTECTIVE CLOTHING

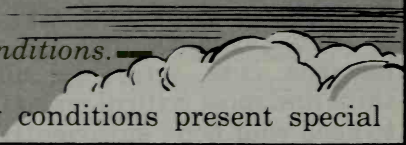
General

You wear clothing for three principal reasons—to **cover your body,** to **protect you and your skin,** and to **aid body functions.** The first is mainly to comply with custom; the second is to protect you against the elements, manmade hazards, cuts, scratches, and insect bites. The third and most critical reason you wear clothing is to keep your body sufficiently comfortable so that it can function normally. Under certain conditions; the best way to keep cool is to put on lightweight clothing; for example, during intense sunlight, you should wear clothing to keep the heat away from your body. Under other conditions, the best way to keep warm is to take off some clothing or to ventilate the clothing by adjusting openings designed in the garment. For example, overheating (sweating) causes clothing to become damp, and damp clothes can be cold. The protective clothing and body armor furnished to you, when your duty assignment requires it, is an integrated system. It will help protect you against both natural and manmade hazards. It provides you with the best that can be produced to maintain your personal safety, efficiency, and health.

COLD WEATHER CLOTHING

●*Design Principles.*

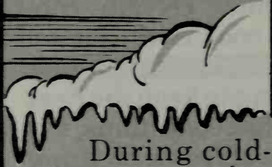
Principles used in the design of cold weather clothing include removable **insulation,** use of several separate **layers,** and devices for **ventilation.** Insulation material slows the flow of heat from the body to the outside. In the layer principle, layers of air are trapped between layers of clothing. The ventilating principle allows the outside air to cool the overheated areas by means of openings in the clothes, such as cuffs, flies, and front closures.



●*Cold Weather Conditions.*

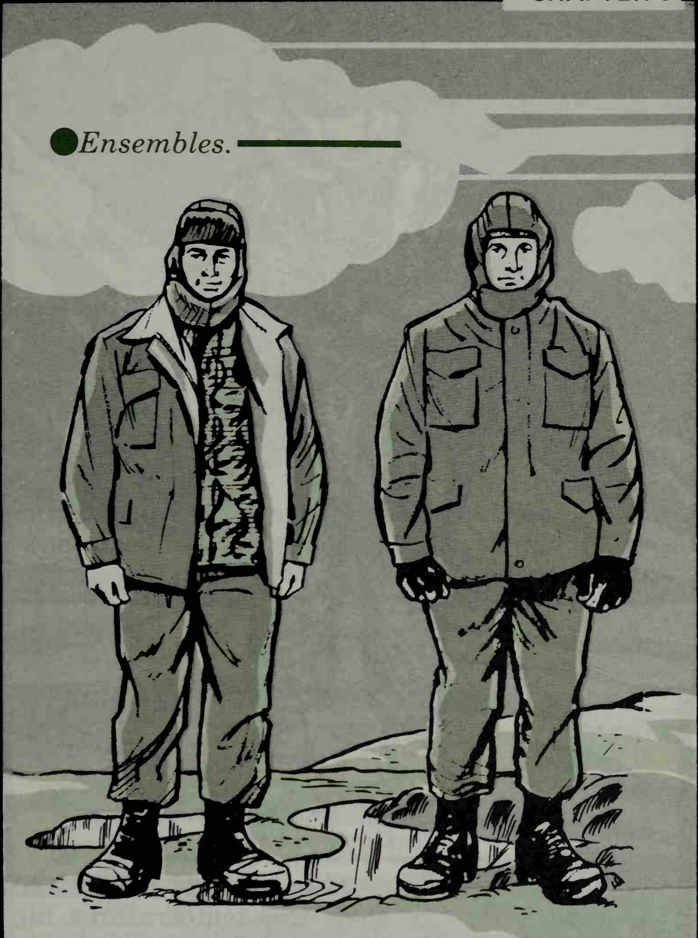
Cold or freezing conditions present special clothing problems.

There are two types of cold weather conditions—*cold-wet* and *cold-dry.*



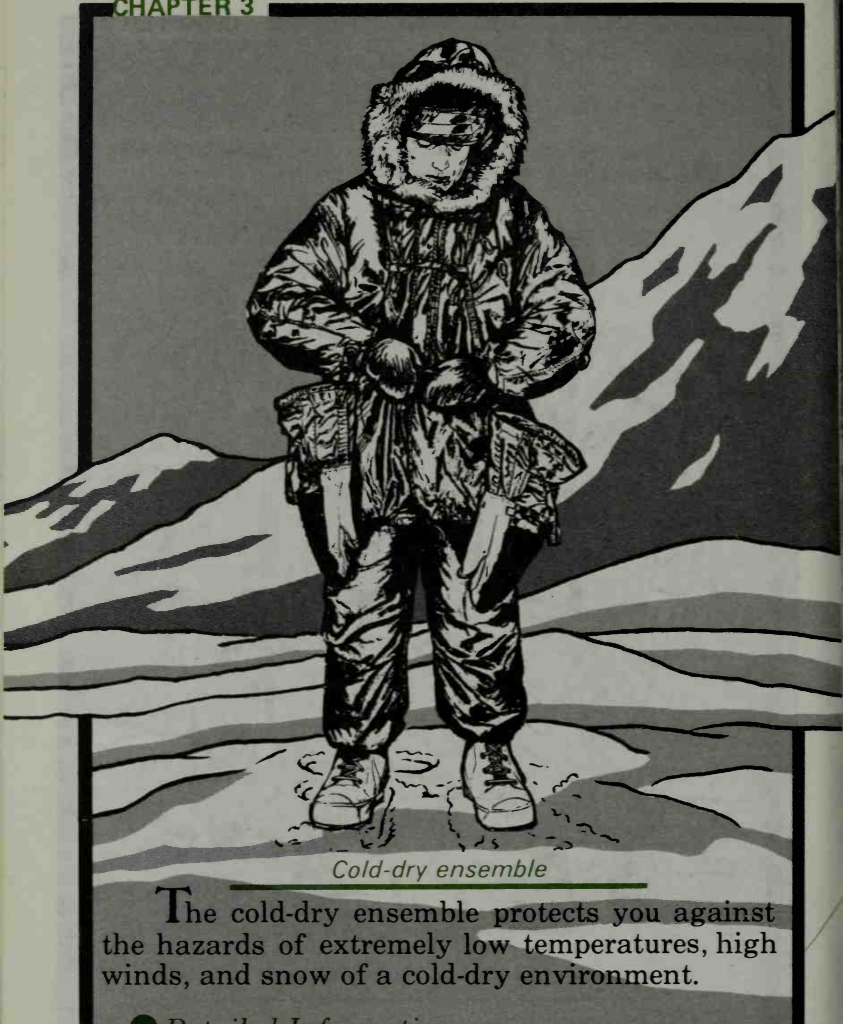
During cold-wet conditions, temperature differences as great as 30° to 40°F (-1° to 4° Celsius) may occur between the warmest time of day and the coldest time of night, causing the ground to freeze at night and thaw during the day. This freezing and thawing, often along with rain or wet snow, causes the ground to become muddy or slushy. During cold-dry conditions, the average monthly temperature is lower than 14°F (-10° Celsius). The ground is usually frozen, and the snow is usually dry. Frequently, strong winds increase the need for protection from the cold.

●*Ensembles.*



Cold-wet ensemble

The cold-wet ensemble protects you against the hazards of changing temperatures, rain, wet snow, mud, and slush of a cold-wet environment.



Cold-dry ensemble

The cold-dry ensemble protects you against the hazards of extremely low temperatures, high winds, and snow of a cold-dry environment.

Detailed Information

You will find detailed information and guidance on the use, care, and fitting of both cold-wet and cold-dry cold weather clothing in **TM 10-275.**

HOT WEATHER CLOTHING

● *Design Principles*

The principles by which heat is dispersed from body surfaces—

- **radiation,**
- **convection,** and
- **evaporation**

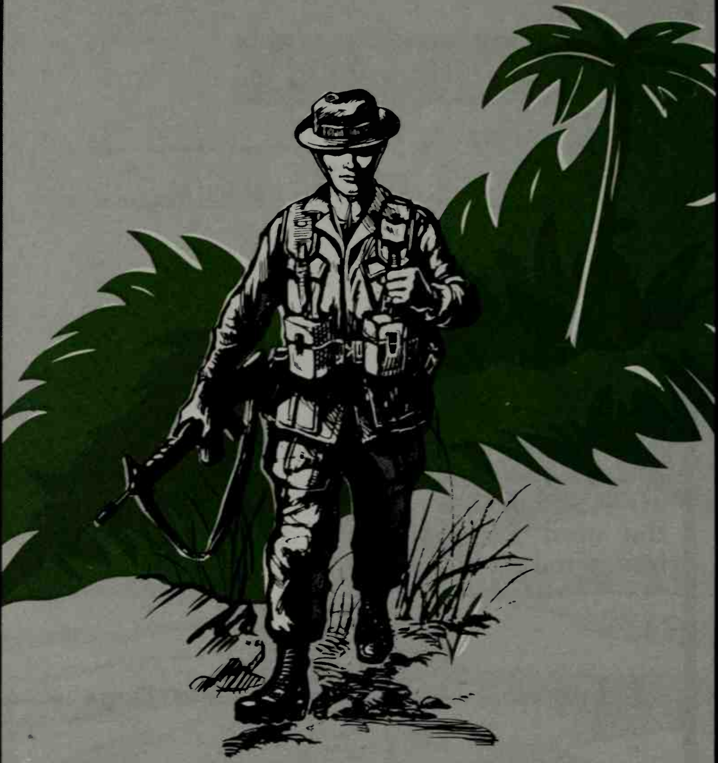
—must be considered when clothing is designed for hot climates. Other factors that affect the design of hot weather clothing include the need for protection, camouflage, and unhampered mobility.

● *Ensemble*

Next Page →

● *Detailed Information*

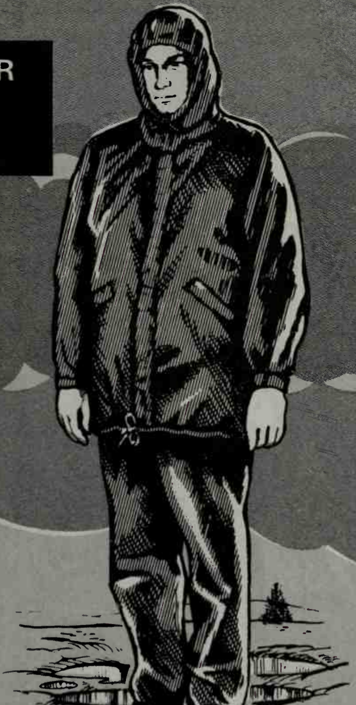
You will find detailed information and guidance on hot weather clothing and equipment in **TM 10-276.**



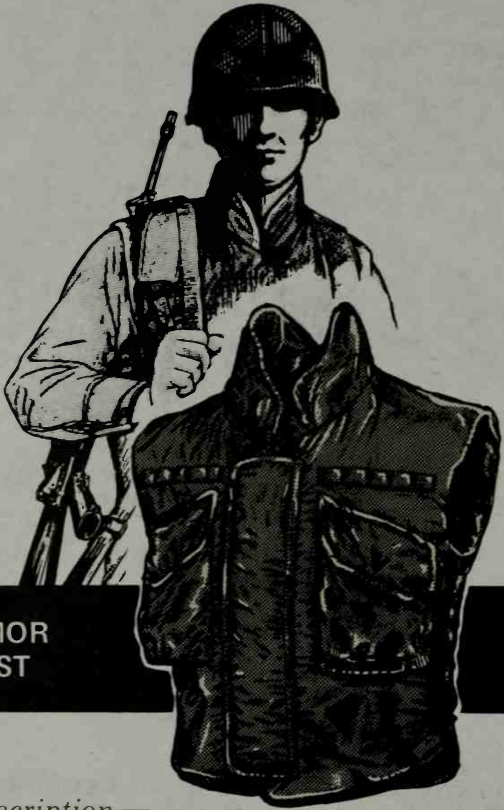
Hot weather ensemble

The hot weather ensemble is made of a lightweight, tightly woven material to provide protection against wind and insects; yet the material is light enough to dry quickly after being soaked by perspiration or water. The clothing is loose fitting and has adjustable openings for airflow ventilation. Adjustable closures are at the waist, neck, midbody, and legs.

WET WEATHER CLOTHING (RAINSUIT)



Your wet weather clothing consists of coated nylon parka and trousers. Use the clothing when you are doing certain physical activities in rain or wet snow which would be hindered if the poncho were worn. The clothing is sized to fit over cold-wet clothing. Use one size smaller if it is not to be used over cold-wet clothing. Avoid moisture buildup in the clothing you wear underneath the rainsuit by either using less underclothing or ventilating body heat to the outside.



ARMOR VEST

Description

The ballistic nylon armor vest has a lightweight, nylon cloth cover. The cover has two bellows patch pockets with flaps, a front hook-and-pile fastener with a flap covering, elastic side laces, and grenade hangers above each front pocket. The vest has a three-quarter, ballistic nylon collar.

Design

The vest consists of a ballistic nylon filler which includes layers of tough nylon cloth stitched together to form the fragment-protective portion of the vest. A vinyl-plastic envelope covers the ballistic nylon filler, and this in turn is enclosed in a lightweight nylon cloth cover. The vinyl-plastic envelope forms a waterproof barrier against damage from moisture, dirt, and other foreign matter. The lightweight, nylon cloth cover provides camouflage, wear resistance, and added protection for inner parts of the vest. The cover has pockets and grenade hangers.

Fitting

The chart below indicates the size vest you should select based on your chest measurements. Adjust the side laces so that the webbing strips with the lace eyelets touch, or butt, each other. If the vest is not comfortable, have someone loosen or tighten the elastic laces on each side. Check the fit while you are bending, stooping, and kneeling.

Armor Vest Sizes

If your chest measures—	Select size—
36 1/2" or less	Small
37"—40 1/2"	Medium
41"—44 1/2"	Large
45" or more	Extra Large

● *Wear*

Wear the armor vest for training or combat missions. When you wear it properly, the vest will protect certain vital areas against low-velocity mine, grenade, mortar shell, and artillery fragments, which cause most combat casualties.

The vest does not, however, protect against small-arms fire.

It does tend to decrease the severity of wounds from rifles and machineguns. Wear the armor vest with any type of combat clothing, and . . .

wear it at all times when you are within range of enemy weapons.

Wear the vest as indicated with the following uniforms or ensembles:

- *Utility (field) uniform and hot weather ensemble.* Wear the vest over your shirt or coat and under any additional layers of clothing.
- *Cold-wet ensemble.* Wear the vest over your field shirt and under the field coat with liner.
- *Cold-dry ensemble.* Wear the vest over the field shirt and under the field coat with liner or the parka with liner.

Inspection

Examine your vest often for—

- Tears, punctures, or damage to the outer nylon cover.
- Bunching, caused by lumps or distortion in the ballistic nylon filler. Bunching is the creasing and folding of the nylon filler within the outer case.
- Noticeable increase in weight, indicating the nylon filler has become wet.
- Damaged or dirty hook-and-pile fastener.
- Broken or missing elastic laces.

Care

Keep your armor vest clean and in usable condition and it will protect you longer. If you do not wear it properly, it may result in less protection, and less protection may result in needless injury.

Do not use the vest as a seat cushion or a pillow. Careless handling and use of the vest for purposes other than body protection may damage the vest or may cause the protective nylon filler to bunch and leave you with unprotected areas.

Repairing.

Turn in a damaged vest as soon as possible. Until it is possible to turn it in, you can make certain temporary repairs. When the outer cover shows damage, first check to see whether the inner vinyl-plastic envelope has been damaged. If so, cover the damaged portion of the envelope with waterproof tape to prevent moisture from reaching the ballistic layers. Next, repair the outer nylon cover with the tape to prevent further damage. When bunching occurs, try to remove it by inserting your hands through the vest armholes, lifting the vest, and shaking the ballistic layers back into position. Then smooth the whole area with your hands.

Cleaning.

Clean your vest regularly to prolong its protective life. **Do not use cleaning solvents or gasoline.** Hand-wash the vest by first removing the laces, brushing off mud and loose dirt, and then washing and rinsing it. *Be sure to wash and rinse the front, back, and inside.* After washing , air-dry the vest, keeping it **away from direct heat and open flame.**

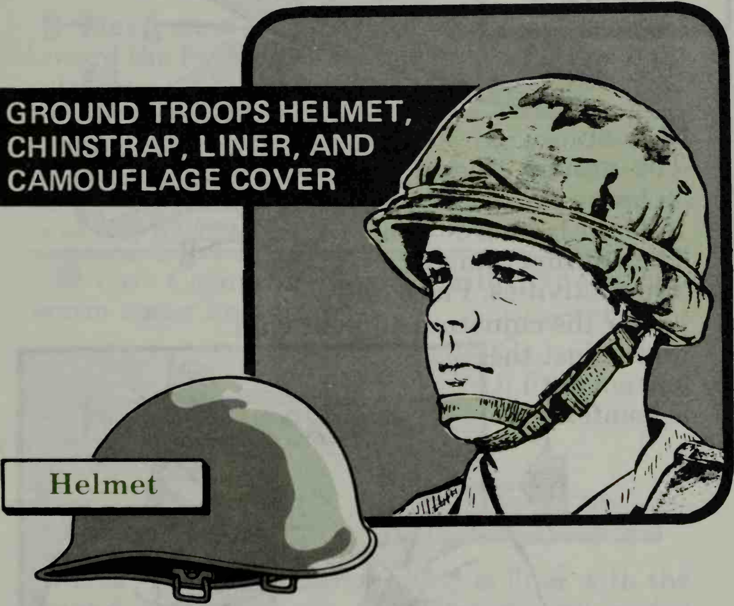
Storing.

Store the armor vest as follows:

- Clean the vest thorougly.
- Clean the hook-and-pile fastener, untie the elastic laces, unlace the front and rear duck webbing, and open side flaps.

- Place the vest in a box, a carton, or an open bin located inside a building or tent.
- Cover the vest with a cloth or plastic sheet to keep out dust, dirt, and moisture.
- **Do not fold the vest.**

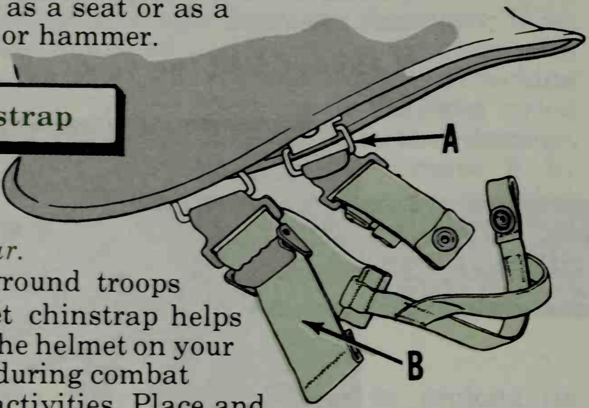
GROUND TROOPS HELMET, CHINSTRAP, LINER, AND CAMOUFLAGE COVER



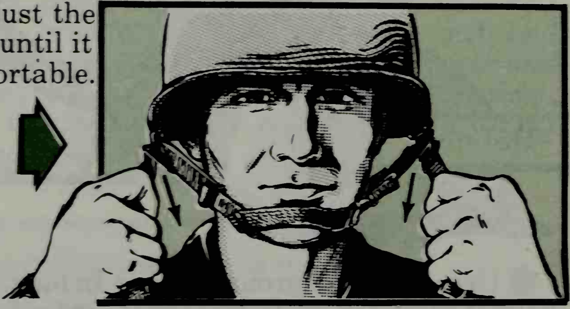
● *Use.* Wear the ground troops helmet over the helmet liner for protection against ballistic-type fragmentation (such as that from artillery fire and grenades) and for protection against ricocheting bullets. The helmet and liner may be worn over the cotton utility cap or over the poncho hood.

● *Care.* Although the helmet is a sturdy item that can withstand rough treatment, you should not use it as a cooking pan; heat destroys the temper of the metal, weakens the helmet, and reduces its protective qualities. Also, do not use the helmet as a seat or as a shovel or hammer.

Chinstrap



● *Wear.* The ground troops helmet chinstrap helps hold the helmet on your head during combat type activities. Place and center the chinstrap on your chin and adjust the tension until it is comfortable.



● *Replacement.* If your helmet has the ball-and-hook type of chinstrap, replace it with a chinstrap with the webbing cup as shown. To do this, remove the ball-and-hook chinstrap by prying up the metal tabs with a screwdriver or heavy knife.

CAUTION: *To avoid injury, point the screwdriver or knife away from you.*

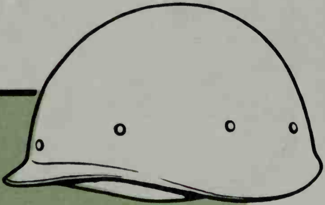
A–Attach the chinstrap with the webbing cup by snapping the slanted hook portion of each buckle over the D-ring attached to each side of the helmet.

B–Make sure the hook is slanting downward toward the front and the adjusting tabs are to the outside.

CAUTION: *The chinstrap with the webbing cup is for ground troops only. It is **NOT** designed for use by parachutists. Information for parachutists is in TM 57-220.*

- *Care.* Clean the chinstrap with mild soap and warm water and air dry it.

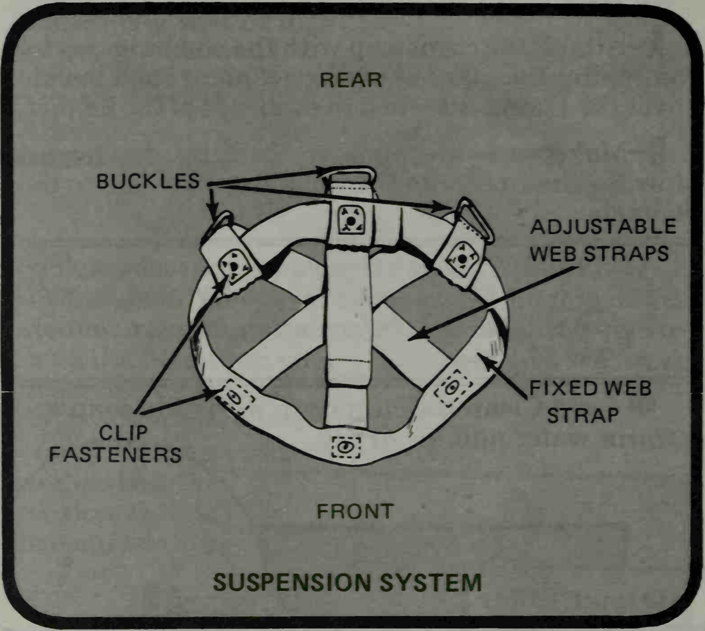
Helmet Liner



Wear the ground troops helmet liner with the ground troops helmet for comfort and added ballistic protection. You also may wear it without the helmet, as a head covering. The liner includes a six-point suspension system made up of cotton webbing with six slide fastener clips attached. The headband is attached to the suspension webbing. There are also three small buckles attached to the inside of the liner used to attach the neckband.

Attachment procedures for the suspension system, headband, and neckband are detailed below.

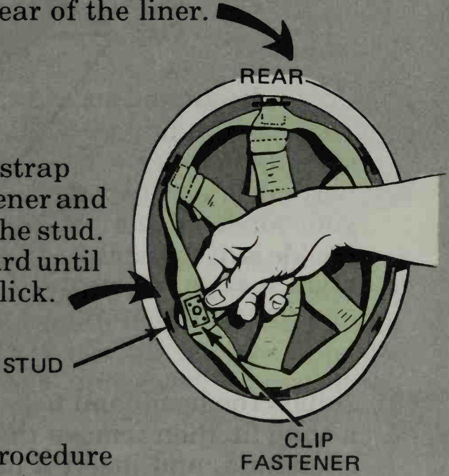
- *Liner suspension system.*


REAR
BUCKLES
ADJUSTABLE WEB STRAPS
FIXED WEB STRAP
CLIP FASTENERS
FRONT

SUSPENSION SYSTEM

The helmet liner suspension system (sometimes called the cradle) is made up of three adjustable web straps, each with a buckle used to adjust the straps for the proper height on your head. The liner may be issued with the suspension system already attached with rivets, or it may be issued with a detachable suspension system, using studs attached to the liner and clip fasteners attached to a fixed web strap onto which are attached the three adjustable web straps. If the liner you are issued does not have the suspension system attached, attach it as follows:

1. Place the suspension web straps in the liner with the three web strap buckles toward the rear of the liner.



2. Grasp a web strap and clip fastener and slide it over the stud. Pull downward until you hear a click.

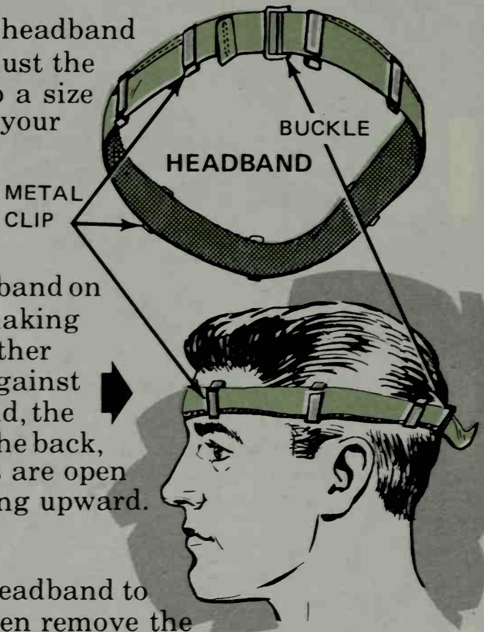
3. Repeat the procedure for the remaining five clip fasteners.

- *Liner headband.*

The helmet liner headband is a leather-lined web strap provided with six metal clips and a buckle for attaching and adjusting the headband to the liner.

To install the headband in the helmet liner, proceed as follows:

1 Open the six headband clips and adjust the headband to a size larger than your head size.



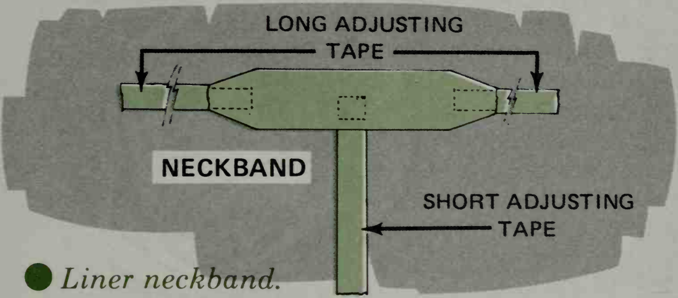
2 Put the headband on your head, making sure the leather portion is against your forehead, the buckle is at the back, and the clips are open and are facing upward.

3 Adjust the headband to a snug fit, then remove the headband, and insert it into the liner so that the clips are toward the crown of the liner, and the buckle is at the back.

4 Place the clips over the fixed web strap of the head suspension band, making sure the two front clips are centered.

5 Close all clips.

6 Adjust the head height of the liner by lengthening or shortening the three adjustable straps of the cradle inside the liner. The straps are adjustable by means of the three web strap buckles toward the rear of the liner.



● *Liner neckband.*

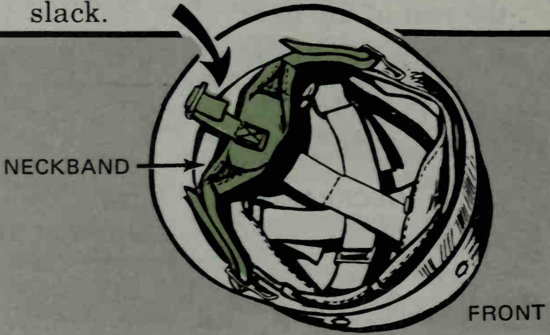
The helmet liner neckband is a web strap with a long adjusting tape sewed to each end and a short adjusting tape sewed to the middle. The smooth surface of the neckband is the surface opposite that to which the tapes are sewed. To install the neckband, refer to the figure and proceed as follows:

1 Thread the two long tapes into the small buckles at each side of the liner, making sure the smooth surface of the neckband faces the front of the liner.

2 Thread the short tape into the rear buckle.

3 Make certain all tapes are straight and free of kinks.

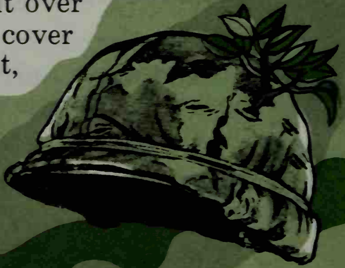
4 Put the liner on your head, and adjust to fit by tightening the long tapes uniformly so that the neckband fits snugly and comfortably against the back of your neck. Pull the short tape to take up the slack.



Suspension system, headband, and neckband attached to helmet liner

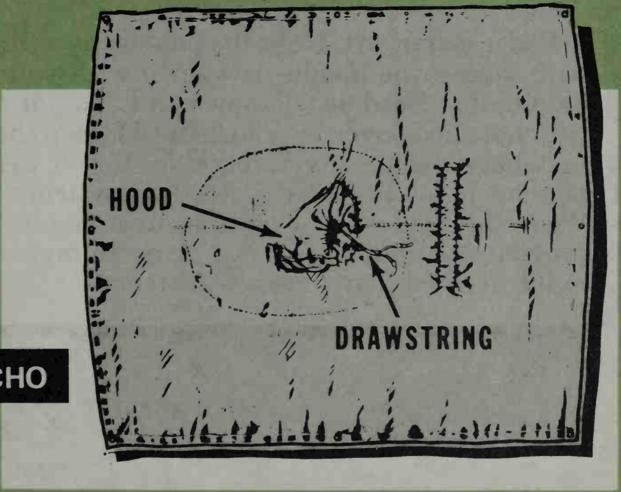
Helmet Camouflage Cover

The camouflage - patterned helmet cover is reversible and has slits for inserting twigs or foliage for additional camouflage. Attach the cover by placing it over the helmet, tucking the cover flaps inside the helmet, and inserting the helmet liner into the helmet.



CHAPTER 4

BIVOUAC EQUIPMENT



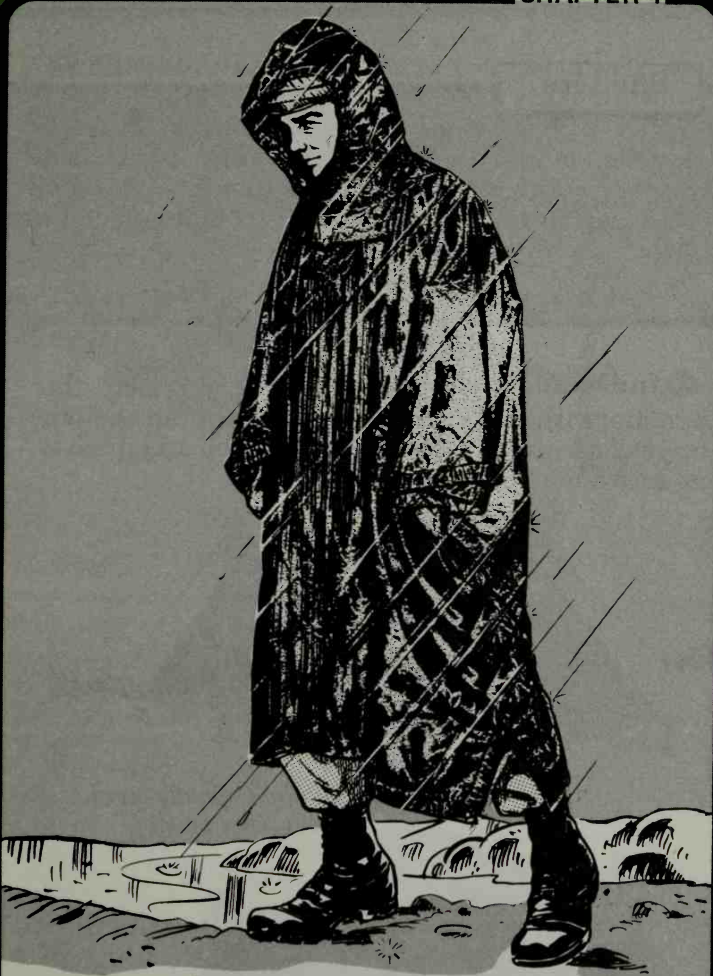
PONCHO

The poncho, with hood is made of coated nylon cloth and is waterproof. It is rectangular in shape with the hood and opening for the neck located at the center. A drawstring is provided at the hood.

● *Use.* Use the poncho as a rain garment, shelter, ground cloth, and sleeping bag.

PONCHO

Rain garment. Wear the poncho as a raincape with your arms inside, or wear it with your arms outside for freedom of movement. To put on the poncho, slip it over your head and fasten the snap fasteners together on each side. If you wear the poncho hood, adjust the hood drawstring to fit. Wear the helmet and/or liner over the hood. To prevent the poncho from flapping in high winds, make sure all fasteners are fastened.



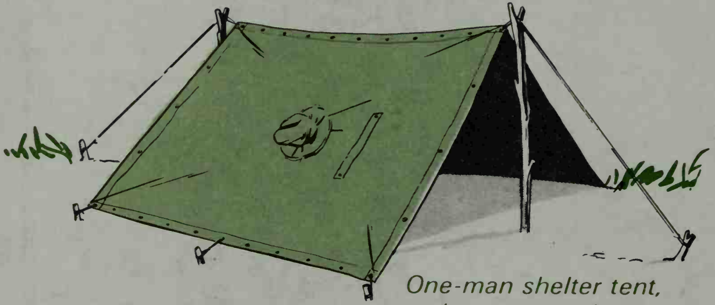
Poncho worn as a rain garment

Note: The poncho may not be suitable or adequate for you under varied conditions. If this is the case, use the wet-weather parka and trousers. (Page **41**).

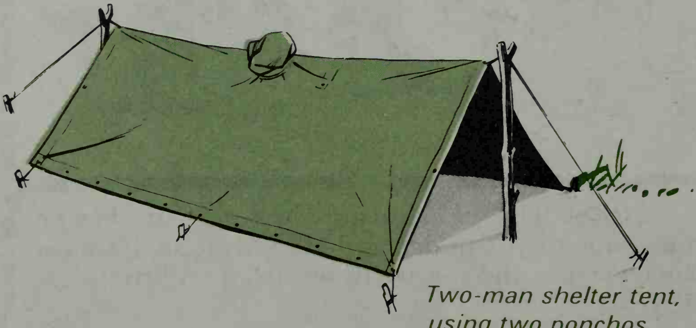
Shelters

You can make various types of shelters and lean-tos by attaching ponchos to trees, tree branches, bushes, sticks, or poles. Always dig a ditch under the eaves of the shelter to drain off rainwater which drips from the edges of the poncho.

● **Individual shelters.** You can pitch the poncho, with the hood closed, as a one-man shelter, or you can attach it to another poncho and pitch it as a two-man shelter.

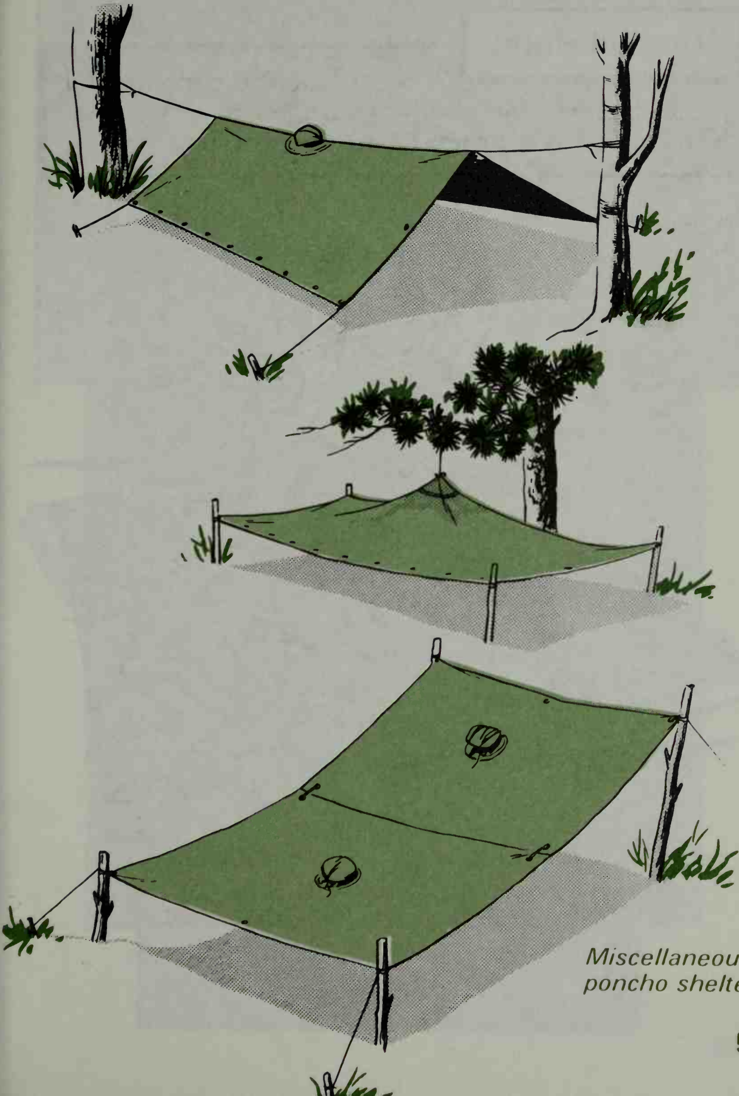


One-man shelter tent, using one poncho



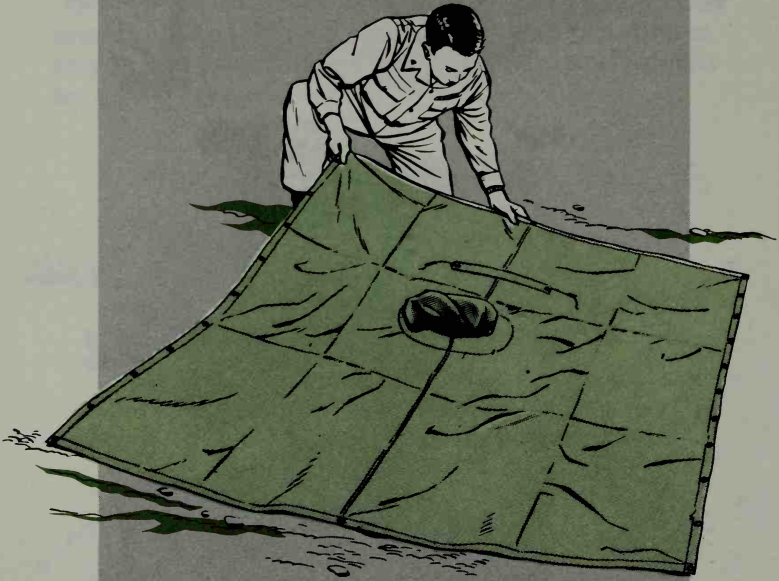
Two-man shelter tent, using two ponchos

- **Miscellaneous shelters.** You can attach two or more ponchos to each other to make various types of shelters.



Miscellaneous poncho shelters

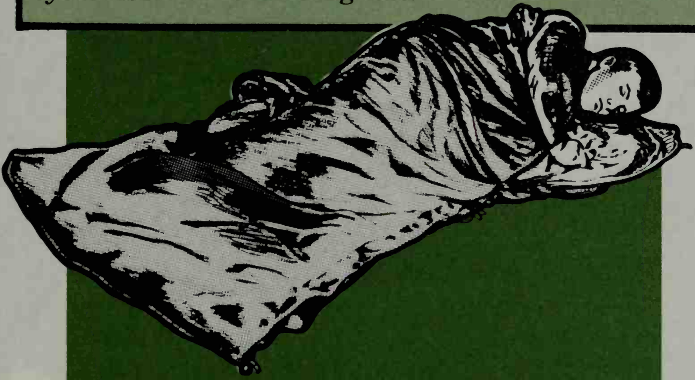
Ground cloth. You can use the poncho as a ground cover for shelters and as a waterproof barrier between ground and sleeping bag.



Poncho used as a ground cloth

Sleeping bag.

Use the poncho as a sleeping bag in 50° F (10° Celsius) and above temperatures with a blanket or a poncho liner and the sleeping shirt. Spread the poncho flat on the ground, making sure the hood opening is tightly closed. If you use a blanket, place it on top of the poncho, fold the poncho and blanket in half lengthwise, and fasten the snap fasteners. Instructions for attaching the poncho liner to the poncho are on pages 66 and 67. If you use the poncho without a blanket or liner, snap the sides together along their entire length, and tuck the foot end under to keep your feet from sticking out.

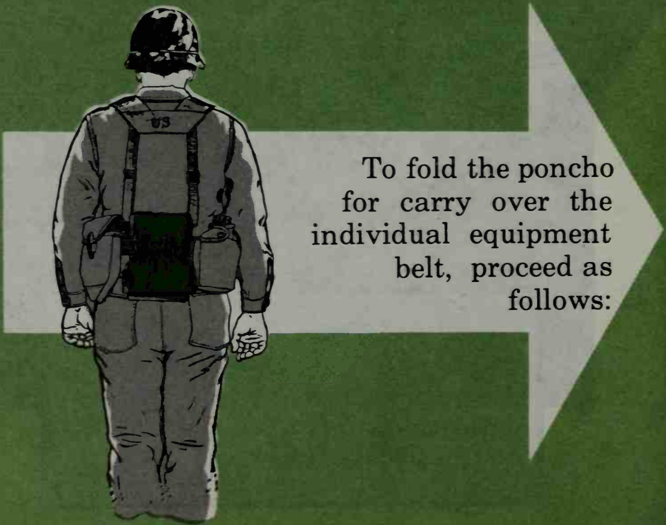


Poncho used as a sleeping bag

CAUTION: **Do not fasten the snap fasteners together when the poncho is used as a sleeping bag in combat areas; it cannot be opened quickly!**

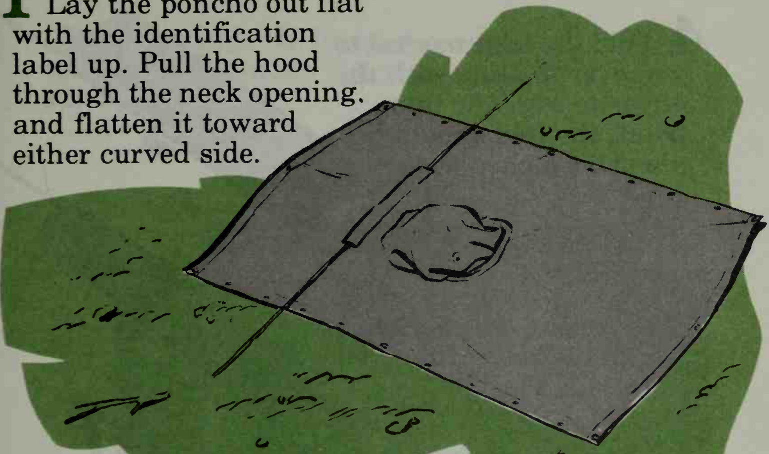
● **Folding and Packing.** When possible, completely air-dry the poncho before folding it. If it is necessary to fold the poncho while it is wet or damp, air-dry and refold it as soon as it is practicable. The poncho can be folded and carried with your load-carrying equipment. Fold the ponch in any appropriate manner and carry it in the dufflebag or the field pack if space permits, but take care not to damage it in folding or by pressing it against sharp or rough objects in the pack or bag.

***CAUTION*. Do not use pressure sensitive paper or any type of tape to hold the poncho in a folded or rolled shape because the waterproof coating can be damaged when the tape is removed.**

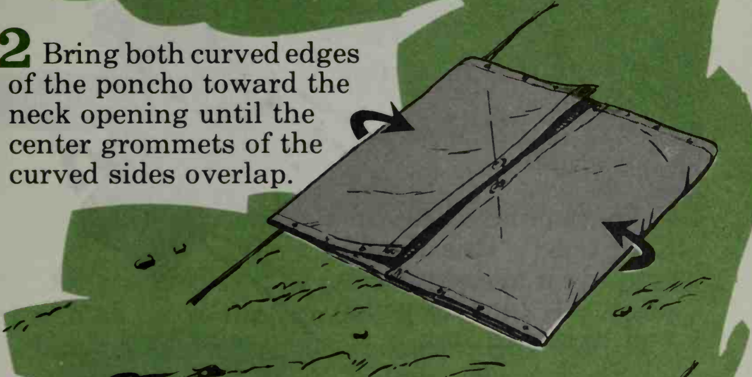


To fold the poncho for carry over the individual equipment belt, proceed as follows:

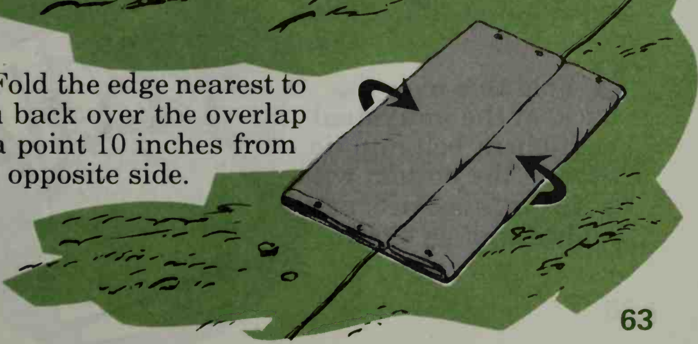
1 Lay the poncho out flat with the identification label up. Pull the hood through the neck opening, and flatten it toward either curved side.



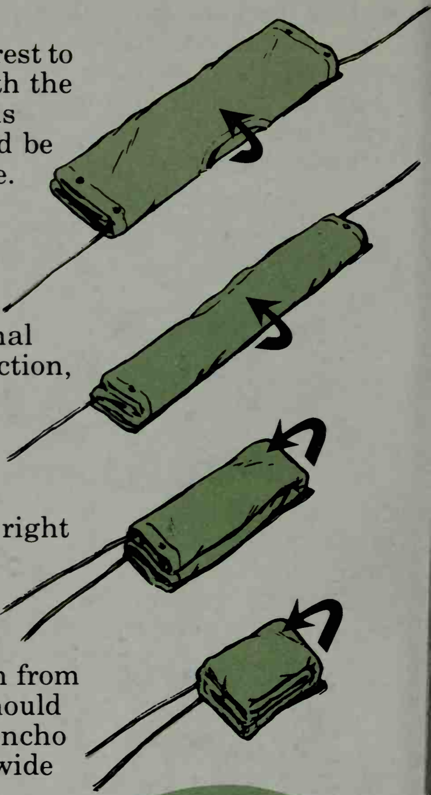
2 Bring both curved edges of the poncho toward the neck opening until the center grommets of the curved sides overlap.



3 Fold the edge nearest to you back over the overlap to a point 10 inches from the opposite side.



4 Fold the edge nearest to you over to aline with the opposite edge. At this point, the fold should be about 11 inches wide.

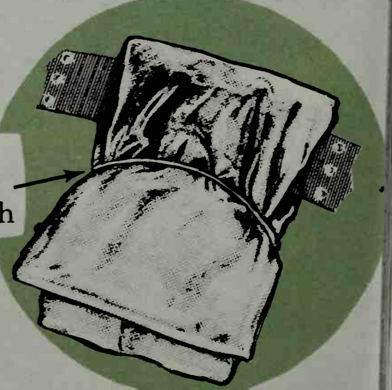


5 Make one additional fold in the same direction, from edge to edge.

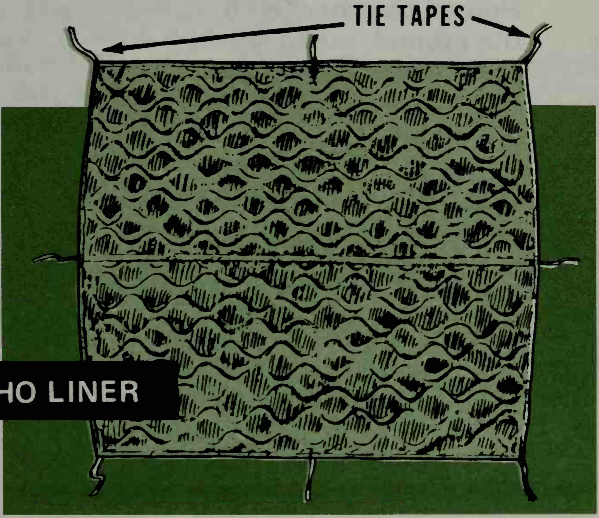
6 Fold in half from right to left.

7 Fold in half again from right to left. This should result in a folded poncho about 6 1/2 inches wide and 16 inches long.

8 Fold this over the back of the individual equipment belt and tie around the bottom with a string, shoelace, or rubberband as shown.



● **Repairing.** If leaks develop, turn in the poncho for repair or salvage.



PONCHO LINER

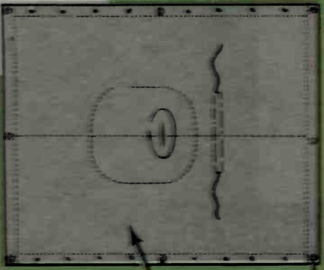
● *Description.* The poncho liner conforms in size and shape to the poncho. It is made of polyester batting sandwiched between two panels of camouflage-patterned, light-weight nylon fabric. The liner has eight tie tapes.

● **Use.** Use the liner as a blanket, or use it with the poncho as a sleeping bag in hot and cool weather when the temperature is above 50° F (10° celsius).

■ To attach the poncho liner to the poncho, proceed as follows:

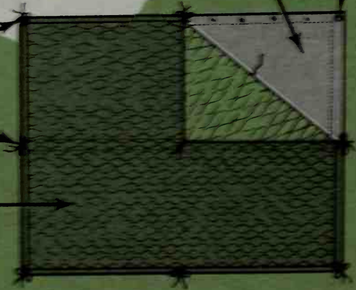
1

Spread the poncho on the ground, making sure that the hood opening is tightly closed and is on the underside.



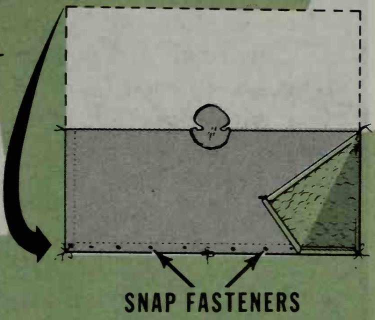
2

Place the liner on the poncho, matching the tie tapes on the liner with the grommets on the poncho, and tie the poncho and liner together.



3

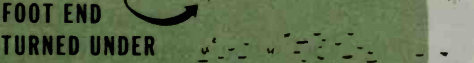
Fold the poncho and liner in half lengthwise, and fasten all snap fasteners along the long side.*



*** CAUTION:** **Do not fasten the snap fasteners together when the poncho is used as a sleeping bag in combat areas; it cannot be opened quickly!**

4

Tuck the foot end under to keep your feet from protruding.



● **Care.** You can handwash the liner, if necessary, with lukewarm water and a mild soap or detergent.

Do not boil it and do not have it dry cleaned.

SHELTER HALF

The shelter half is made of water-repellent, mildew-resistant cotton and rayon duck and has triangle-shaped flaps at both ends. It is issued to you with five tent pins, a guy line, and a three-section tent pole.

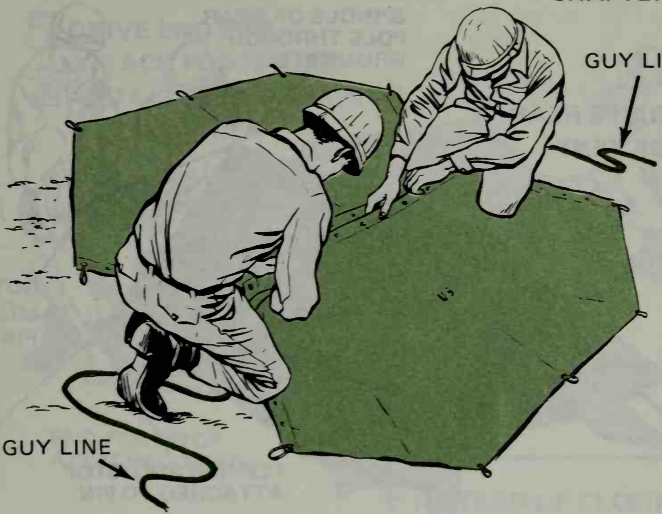
■ The shelter half, when joined to another by snap fasteners, forms a shelter for two men.

■ It is ventilated by opening one or both ends.

■ The shelter half may be used by itself as a fly for shade and shelter.

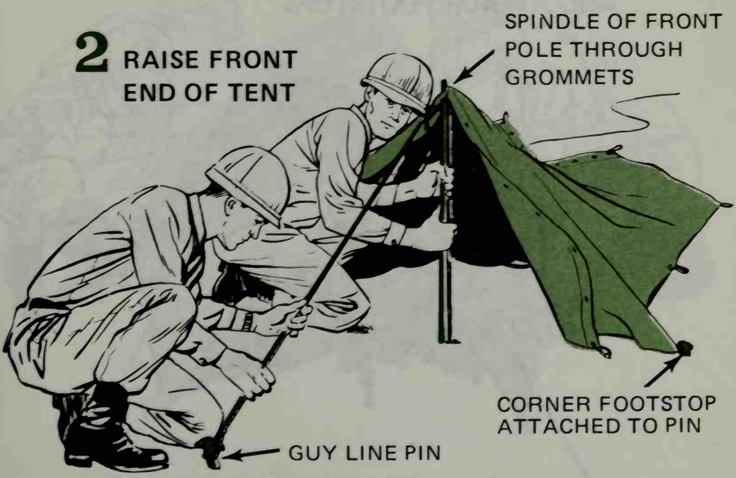
● **Pitching.** Two men can pitch the two-man tent in 5 minutes as follows:

- Spread two shelter halves on the ground, one with the snap fasteners up and to the center, and the other with the snap fasteners down and to the center.
- Proceed as shown: ⟶


GUY LINE
GUY LINE

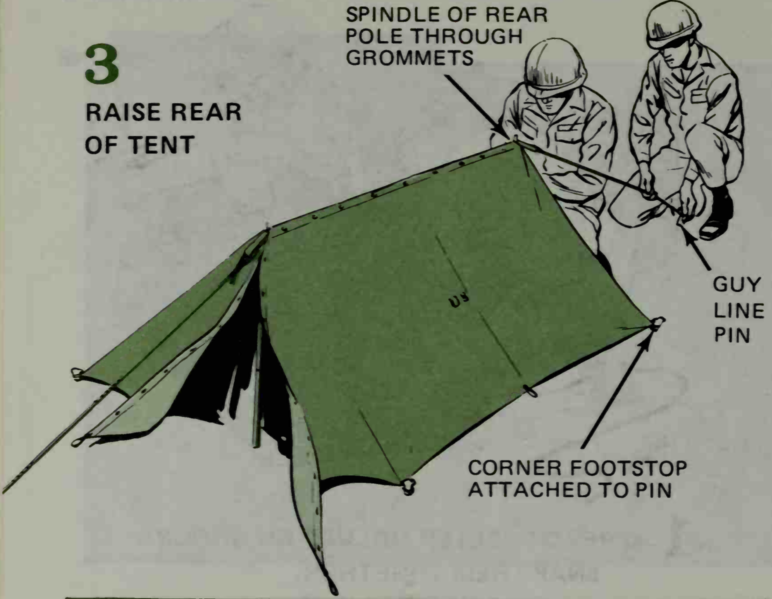
1 SPREAD SHELTER HALVES ON GROUND.
SNAP THEM TOGETHER.
ATTACH GUY LINES

2 RAISE FRONT
END OF TENT

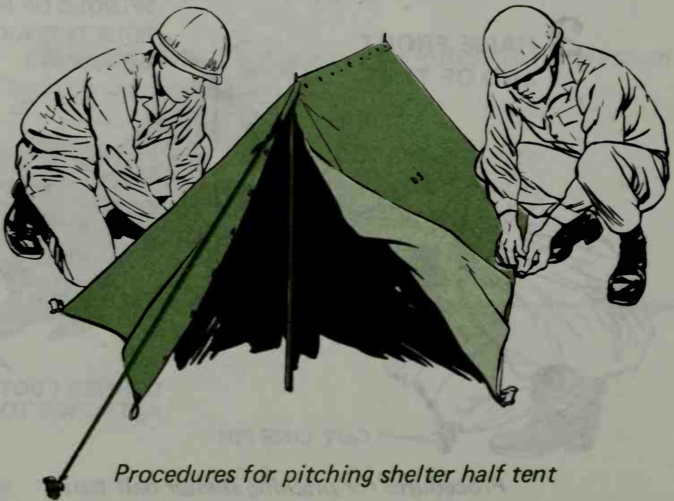

SPINDLE OF FRONT
POLE THROUGH
GROMMETS
CORNER FOOTSTOP
ATTACHED TO PIN
GUY LINE PIN

Procedures for pitching shelter half tent

3 RAISE REAR OF TENT

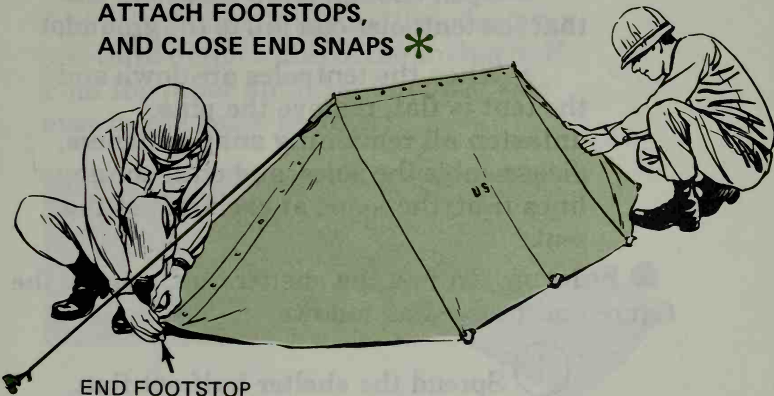

SPINDLE OF REAR POLE THROUGH GROMMETS
GUY LINE PIN
CORNER FOOTSTOP ATTACHED TO PIN
US

4 DRIVE SIDE CENTER PINS AND ATTACH FOOTSTOPS

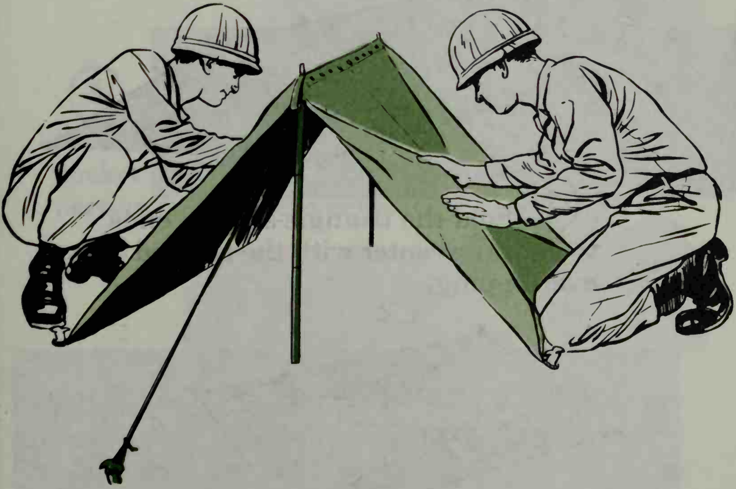


Procedures for pitching shelter half tent

5 DRIVE END PINS, ATTACH FOOTSTOPS, AND CLOSE END SNAPS *


US
END FOOTSTOP ATTACHED TO PIN

*** INSTEAD OF CLOSING ENDS, THEY MAY BE FOLDED BACK FOR VENTILATION.**



Procedures for pitching shelter half tent

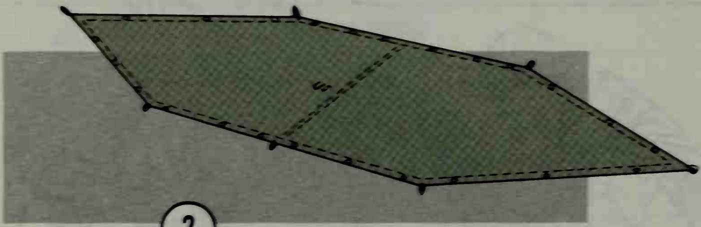
Striking.

- Open enough snap fasteners so that the tentpoles can fall to the ground.

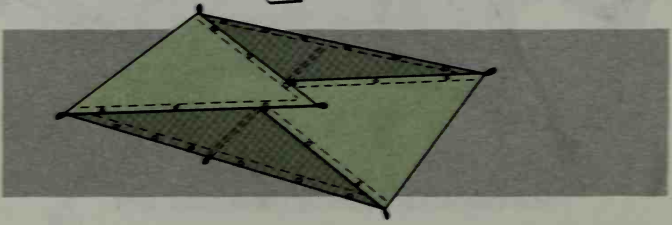
- When the tentpoles are down and the tent is flat, remove the pins, unfasten all remaining snap fasteners, disassemble the poles, and untie the guy lines from the loops at each end of the tent.

Folding. To fold the shelter half, refer to the figure and proceed as follows:

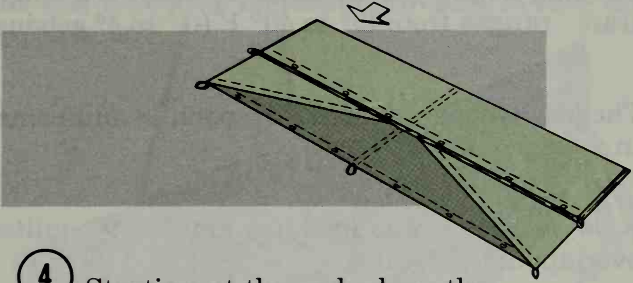
① Spread the shelter half out flat with the "U.S." side up. Place tentpole sections, pins, and guy lines in the center of the wide side of either triangle-shaped end.



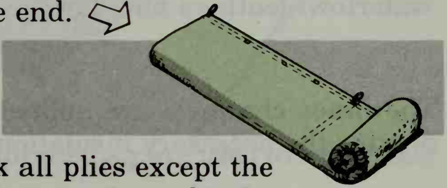
② Fold the triangle-shaped ends toward the center with the pointed ends overlapping.



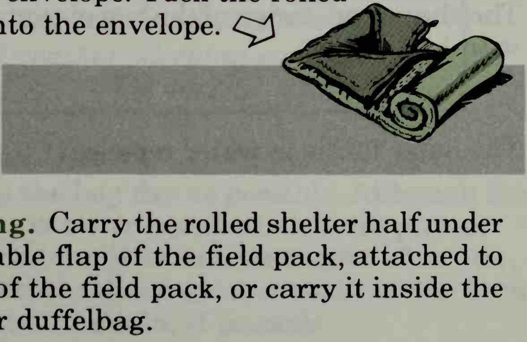
③ Working at either unfolded side, fold lengthwise, bringing the edge over one-third of the width of the shelter half. Fold the other unfolded unfolded side over in the same manner.



④ Starting at the end where the tentpole sections were placed, roll the shelter tightly and evenly until about 6 inches from the end. ⇨



⑤ Fold back all plies except the bottom ply on the opposite end to form a pocket or envelope. Tuck the rolled portion into the envelope. ⇨



● **Carrying.** Carry the rolled shelter half under the expandable flap of the field pack, attached to the bottom of the field pack, or carry it inside the field pack or duffelbag.

INTERMEDIATE COLD WEATHER SLEEPING BAG

● **Description.** The intermediate cold weather sleeping bag is for use in areas where the temperature ranges from 10° to 40° F (-1° to 4° celsius).

The bag weighs about 7 ½ pounds and comes in one size.

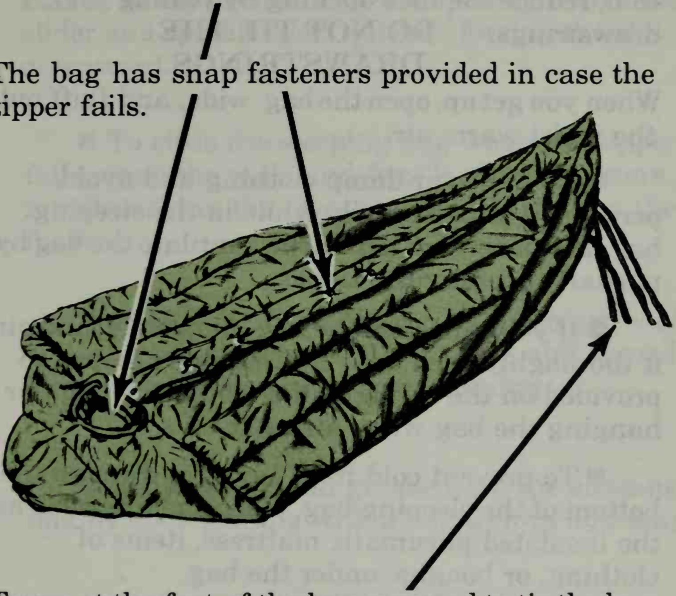
It is a mummy-shaped bag made with quilted overlapping channels.

The outer channels are filled with a mixture of waterfowl feathers and down.

The inner channels are quilted with batting to provide the necessary insulation.

The shape and design of the bag give more warmth with less weight.

The outer fabric is water repellent.



The full length free-running slide fastener (zipper) at the front opening of the bag has webbing loops attached to the slider for ease of operation.

The bag has snap fasteners provided in case the zipper fails.

Tapes at the foot of the bag are used to tie the bag when it is rolled.

You will find detailed information on cold weather sleeping equipment in TM 10-275.

● Care and Use.

■ Keep the bag dry as possible. Although the outer fabric is *water repellent* and will protect against moisture, **it is not waterproof** so you should select the driest ground possible and keep the bag out of the rain, if possible.

- Breathe through the face opening to prevent your breath from wetting the bag. If your face is cold, reduce the face opening by pulling the drawstrings. **DO NOT TIE THE DRAWSTRINGS.** When you get up, open the bag wide, and fluff out the moist warm air.

- Do not wear damp clothing and avoid perspiring unnecessarily while in the sleeping bag. If you become too warm, ventilate the bag by partially opening the zipper.

- If you can, open the bag completely, and air it thoroughly each day. Two webbing loops are provided on the inside at the foot of the bag, for hanging the bag when airing it.

- To prevent cold from entering through the bottom of the sleeping bag, place padding such as the insulated pneumatic mattress, items of clothing, or boughs, under the bag.

- Fluff the bag thoroughly before using it.

- Use the poncho under the sleeping-bag case to protect it against ground moisture.

- Brush and clean your clothing before getting into the bag; do not wear too many clothes. Wear the sleeping hood and clean, dry, winter underwear and socks in the bag, and for added warmth, wear the wool shirt and trousers.

- To close the sleeping bag, keep both sides of the zipper close together, and pull the slider webbing loop up to the face opening.

■ To open the bag, pull the webbing loop down to the foot end of the bag. ***FOR EMERGENCY EXIT,*** grasp each side of the opening above the slider and spread apart quickly, forcing the slider downward.

■ To close the sleeping bag when the zipper fails, snap the male and female snap fasteners together along the front opening starting at the foot end.

■ ***FOR EMERGENCY EXITS,*** grasp each side of the opening above the snaps and spread apart quickly along the front opening.

■ Remove dirt and grease from the sleeping bag by spotcleaning with a damp cloth and soap.

■ *The sleeping bag should be laundered in accordance with* ***formula G, TM 10-354.***

CAUTION: Because of possible health and fire hazards, do not dryclean sleeping bags.

Do not smoke in the sleeping bag.

■ Repair all holes and tears as soon as possible as shown in ***TM 10-8400-201-23.***

● Packing.

Pack the sleeping bag as follows:

- Close the zipper and fasten the top, center, and bottom snaps.
- Lay the bag out flat with the zipper side up and fold it lengthwise along the zipper.
- Start at the head end and roll the bag tightly and evenly to the foot end tie tapes.
- Wrap the foot end tie tapes around the rolled bag, tighten the straps, and tie with a bow knot.
- When possible, carry, store, or transport the sleeping bag inside the waterproof clothing bag.

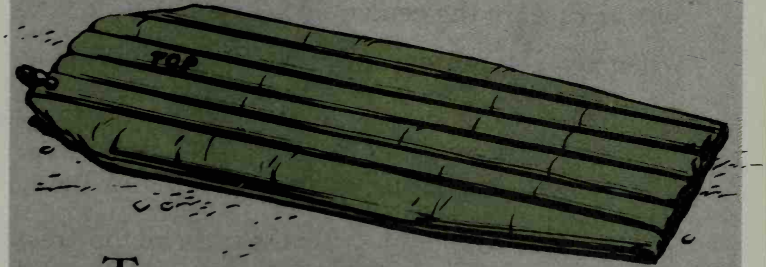
EXTREME COLD WEATHER SLEEPING BAG

● Description. The extreme cold weather sleeping bag is identical to the intermediate cold weather sleeping bag except that it contains more insulation and weighs about 2 pounds more. It, too, comes in one size. The bag is for use in areas where temperatures range below 10° F (-1° celsius). With additional shelter the bag can be used in temperatures below 40° F (4° celsius).

Care and Use.

You take care of and use the extreme cold weather sleeping bag the same way you do the intermediate cold weather bag, except you *always use the insulated pneumatic mattress under the extreme cold weather bag.* You also pack it the same way.

INSULATED PNEUMATIC MATTRESS



The insulated pneumatic mattress is made of rubber-coated nylon cloth and is shaped to conform to the sleeping bag. The mattress weighs about 3 1/4 pounds and has batting inside each channel for insulation.

Use. Always use the mattress (with the inflating tube up) under sleeping equipment to add warmth and comfort and to keep the equipment dry.

- Do not overinflate, as overinflation decreases sleeping comfort.

- Test the inflated mattress for comfort by sitting on it. When you are sitting on the mattress, your buttocks should barely touch the ground.

● Care.

Inflate the mattress by blowing air into it.

Do not use air lines or other mechanical means to inflate it.

Do not bring a mattress that has been inflated outdoors into a heated shelter without first deflating the mattress.

Excessive pressure or expansion of inner air will tear or rupture the cemented seams.

When possible, air-dry a wet mattress before using it.

Take care not to place the mattress on sharp objects that may tear or make holes in it.

To check for small holes, dip the inflated mattress in water, and look for air bubbles.

Repair small holes and tears by using the *cold-weather, insulated-boot/pneumatic-mattress maintenance kit.* Refer to **TM 10-8400-201-23** for other repairs.

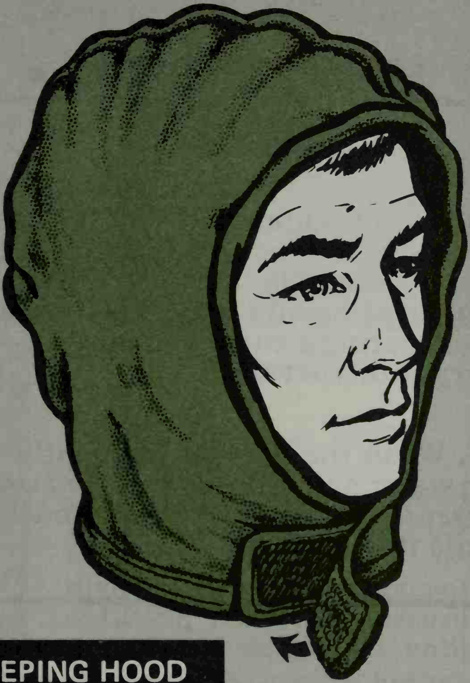
● Folding and Packing.

To fold the mattress for packing,

① remove stopper, fold lengthwise, and roll mattress toward the open valve to release all the air.

② Replace stopper.

③ Fold the mattress in one-quarter lengths and place it in the waterproof clothing bag.



SLEEPING HOOD

The sleeping hood has chin flaps with a touch-and-close fastener. Wear it when you are in the sleeping bag. Its purpose is to protect the head area of the sleeping bag from perspiration, dirt, and head or hair oils.

Wash the hood by first closing the fastener and then hand squeezing it in lukewarm water and a mild detergent. Rinse in lukewarm water and squeeze out the excess water. **Do not wring it to dry it.**

BLANKET

● **Folding and packing.** Fold the blanket so that it can be carried inside the field pack under the expandable flap, or outside attached to the bottom of the pack with the two adjustable securing straps. You may also fold it and carry it in your duffelbag.

● **Care.** Wash the blanket frequently with lukewarm water and mild soap; *do not use hot or boiling water.* Stretch the blanket back into shape while it is drying.

CHAPTER 5

LOAD-CARRYING EQUIPMENT

INTRODUCTION

General

- Although the M-1956 lightweight load-carrying equipment has been replaced as the standard item by the all-purpose lightweight individual carrying equipment (ALICE), you may be issued the M-1956 equipment until the supplies are exhausted. For this reason, both load-carrying systems are included in this manual. Regardless of the system you have, you must follow certain rules if the load-carrying equipment is to do the job for which it is intended.

LOAD-CARRYING RULES

If you follow the rules listed below, you'll be able to carry loads with much more ease and comfort.

■ *If you don't follow the rules, you'll make a hard job that much harder.*

Here are the simple rules....

- Keep your load as light as possible.
- Know your equipment.
- Assemble the equipment properly.
- Keep every item in its proper place.

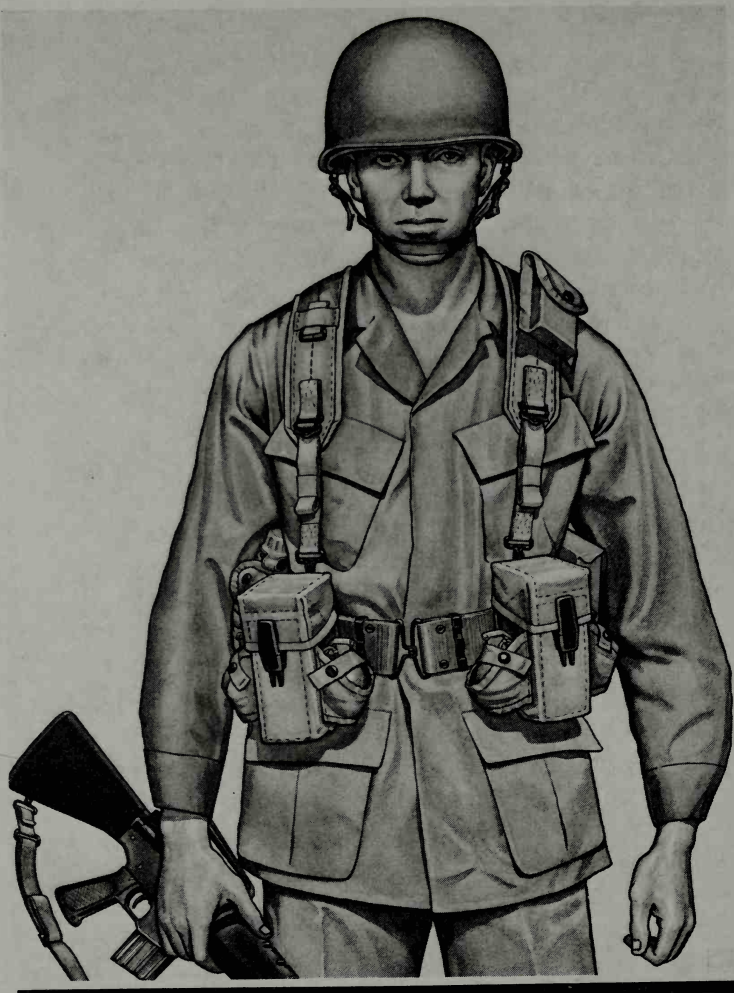
AND REMEMBER – –
IT'S YOUR BACK!

● *Fighting and Existence Loads Concept*

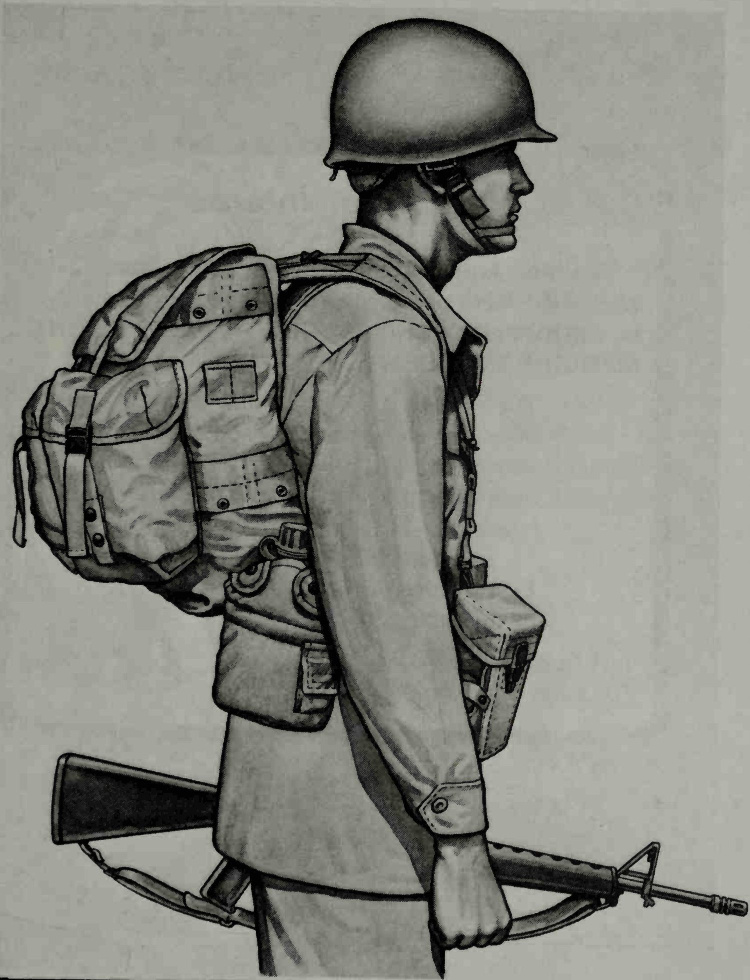
The important point in the fighting and existence loads concept is that you should carry only the items necessary to complete your immediate mission. **The load you carry should not include any other item that can be carried another way.** Because the type of mission, terrain, and environmental conditions will influence your clothing and equipment requirements, your unit commander may prescribe to you the essential items. Remember—*the prime purpose of the fighting and existence loads concept is to lighten your load.*

Fighting Load. The typical fighting load is made up of essential items of individual clothing, equipment, weapons, and ammunition that are carried by you to complete the immediate mission of your unit. See *appendix C* for a list of typical items included in the fighting load, using the all-purpose lightweight individual carrying equipment (ALICE).

Existence Load. The typical existence load consists of items other than those in the fighting load which are required to sustain or protect you, which may be necessary for your increased personal and environmental protection, and which you normally would not carry. *When possible, the existence load items are transported by means other than man-carry.* Otherwise, both the fighting and existence loads are carried by you—the soldier. See *appendix C* for a list of typical items included in the existence load, using the all-purpose lightweight individual carrying equipment (ALICE).



Fighting Load



Existence Load

● Lightweight Load-Carrying Equipment

Historical Interest

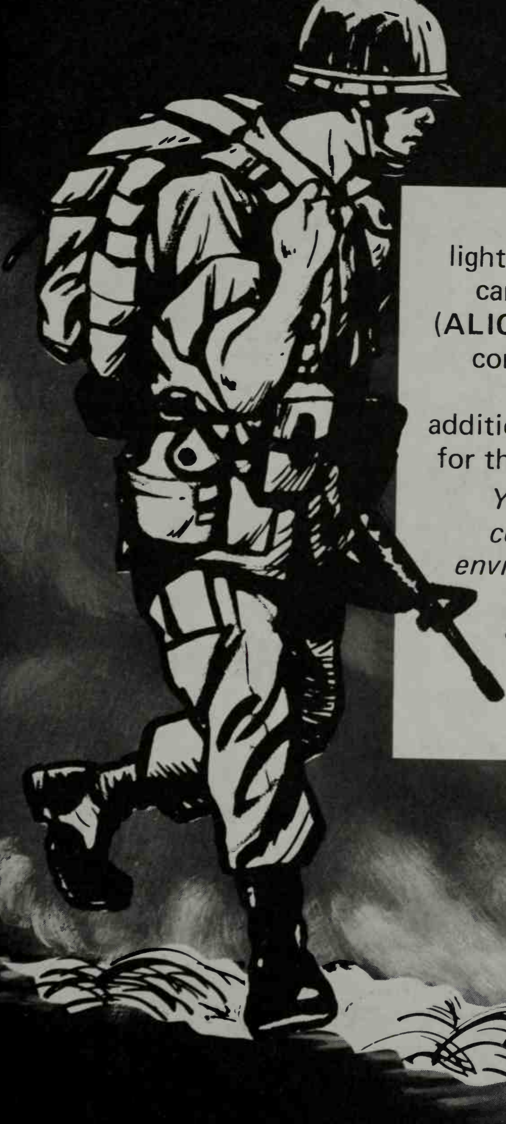
In the Army of the Potomac [during the Civil War] there were two species of marching employed—in "**HEAVY MARCHING—ORDER**", and in "**LIGHT MARCHING—ORDER**".

The former meant that the troops were to carry all they possessed with them; the other was to march with only the musket, ammunition, haversack, and canteen, thus being in trim for working or fighting. Every order to march specified one or the other manner.

Joel Cook ---
The Siege of Richmond

ALL-PURPOSE LIGHTWEIGHT INDIVIDUAL CARRYING EQUIPMENT

(ALICE)

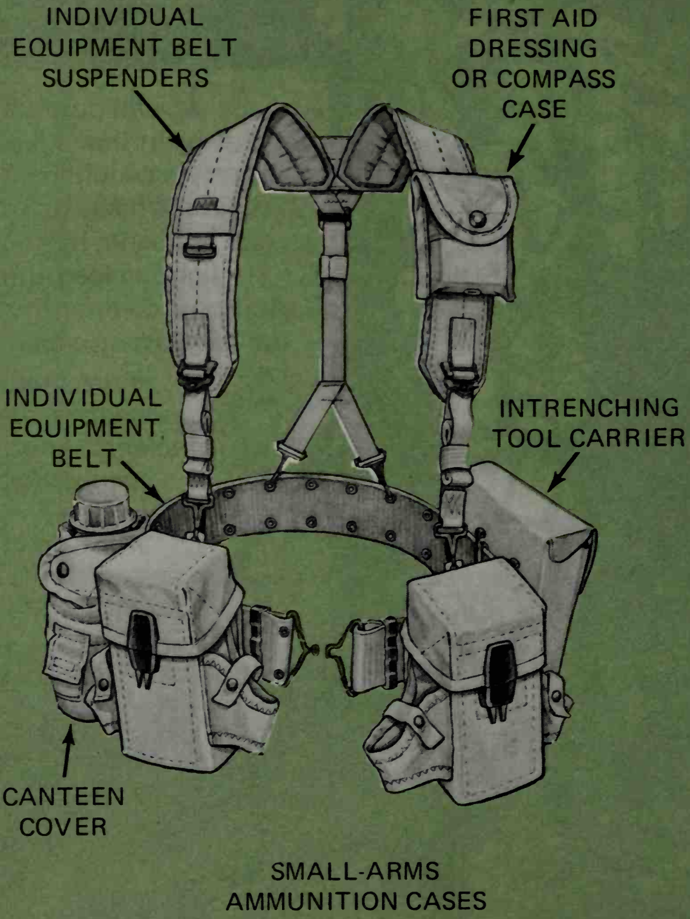


The all-purpose lightweight individual carrying equipment (**ALICE**) is made up of components for the **fighting load** and additional components for the **existence load.**

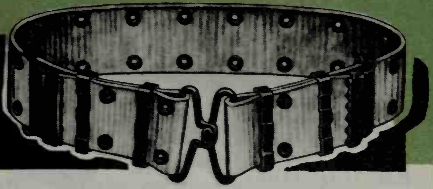
You can use these components in all environments – hot, temperate, cold-wet regions, and even in cold - dry arctic regions.

CHAPTER 5

FIGHTING LOAD COMPONENTS


INDIVIDUAL EQUIPMENT BELT SUSPENDERS
FIRST AID DRESSING OR COMPASS CASE
INDIVIDUAL EQUIPMENT BELT
INTRENCHING TOOL CARRIER
CANTEEN COVER
SMALL-ARMS AMMUNITION CASES

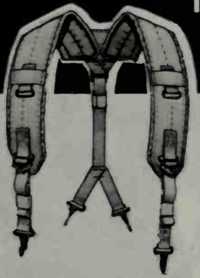
INDIVIDUAL EQUIPMENT BELT



Use. Use the individual equipment belt to carry the ammunition cases, intrenching tool carrier, and the canteen cover.

Fitting. The belt is issued in medium and large sizes so that it can be adjusted to fit over all layers of outer clothing, including the complete cold-dry ensemble and the armor vest. If your bare waist measures less than 30 inches, wear the medium size. If your bare waist measures 30 inches or more, wear the large size.

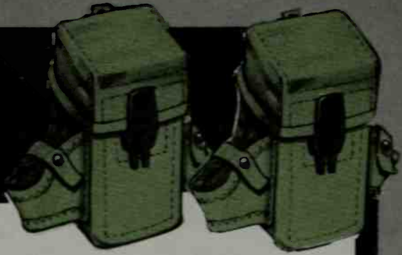
INDIVIDUAL EQUIPMENT BELT SUSPENDERS



Use. Use the belt suspenders to support the individual equipment belt when the appropriate components are attached to the belt. Web band metal loops are provided on each suspender strap for attachment of small items such as the first aid/compass case or a flashlight.

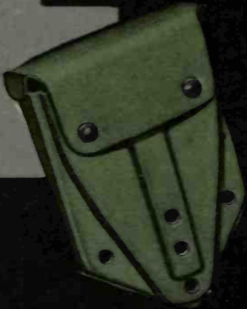
Fitting. **The suspenders are issued in one size only and are adjustable.**

SMALL-ARMS AMMUNITION CASES



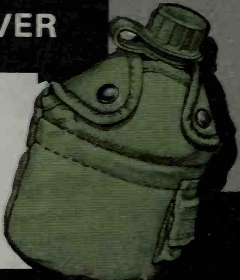
Each of the two small-arms ammunition cases holds three 30-round magazines (M-16 rifle). The cases have fragmentation grenade pockets on each side and a plastic fastener that can be opened and closed with one hand.

INTRENCHING TOOL CARRIER



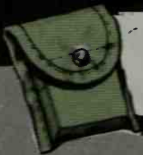
Use the plastic intrenching tool carrier to carry the lightweight, collapsible intrenching tool.

CANTEEN COVER



Use the canteen cover to carry the plastic water canteen and metal cup. The cover has a small pocket attached for carrying water purification tablets.

FIRST AID DRESSING/COMPASS CASE



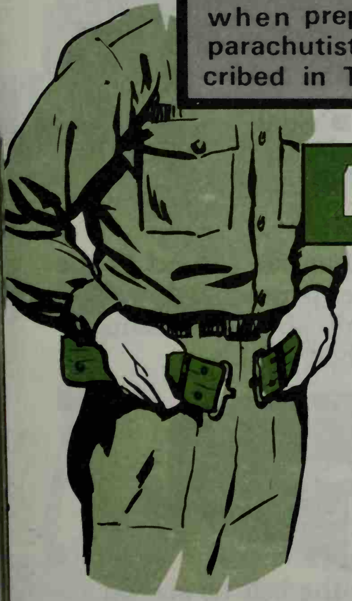
Use the case to carry either a first aid dressing or an unmounted magnetic compass.

CHAPTER 5

ASSEMBLY OF FIGHTING LOAD COMPONENTS

The procedure for assembling the fighting load components of the all-purpose lightweight individual carrying equipment (ALICE) is described below.

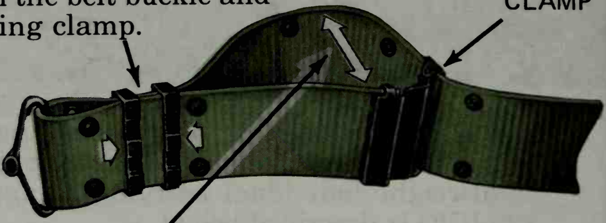
NOTE: A different procedure must be followed when the equipment is assembled by parachutists when preparing for a jump. The parachutist's procedure is described in TM 57-220.



1 Fit and Adjust the Belt

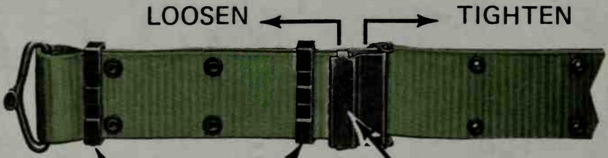
Try on the individual equipment belt and determine the length needed to have it fit snug--not tight. Then, and at each end of the belt, proceed as follows:

- Slide the two metal keepers away from the belt buckle and the adjusting clamp.



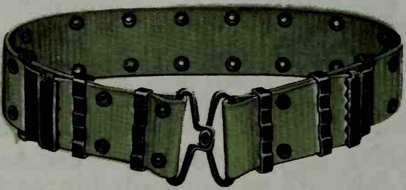
- Unlock the adjusting clamp by spreading apart the looped webbing .

- Slide the adjusting clamp toward the belt buckle to loosen the belt and away from the belt buckle to tighten it.



- Squeeze the adjusting clamp to lock the belt in place; then ....

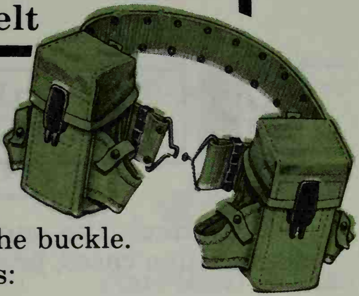
slide the metal keepers so that one is next to the adjusting clamp and the other is next to the belt buckle. Each adjusting clamp should be about the same distance from the belt buckle.



- Buckle and place the belt as shown.

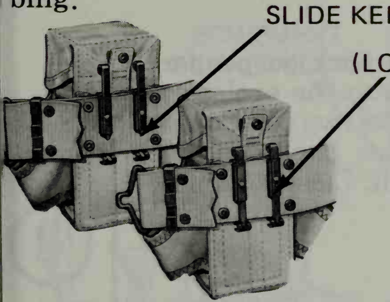
2

Attach the Ammunition Cases to the Belt

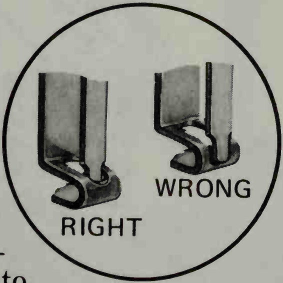


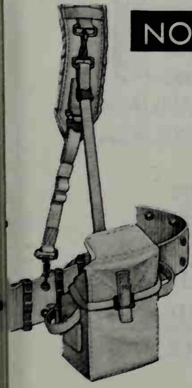
Attach one ammunition case to the left side of the belt next to the belt buckle and the other ammunition case to the right side of the belt next to the buckle. To do this, proceed as follows:

- Pull each slide keeper attached to the case to an open position and slide it over one thickness of the webbing. Make sure the slide keepers are vertical and the bottom holes are out beyond the webbing.



- Push the slide keeper down and into the bottom holes.





NOTE: When attaching 20-round cases, attach the front suspender snap hooks to the top eyelet nearest the buckle on each end of the belt. Fasten the snap hook on the end of each ammunition case supporting strap to the metal loop on the front of each shoulder strap.

3

Attach the Suspenders to the Belt and Ammunition Cases.

To attach the suspenders to the belt and ammunition cases, proceed as follows:

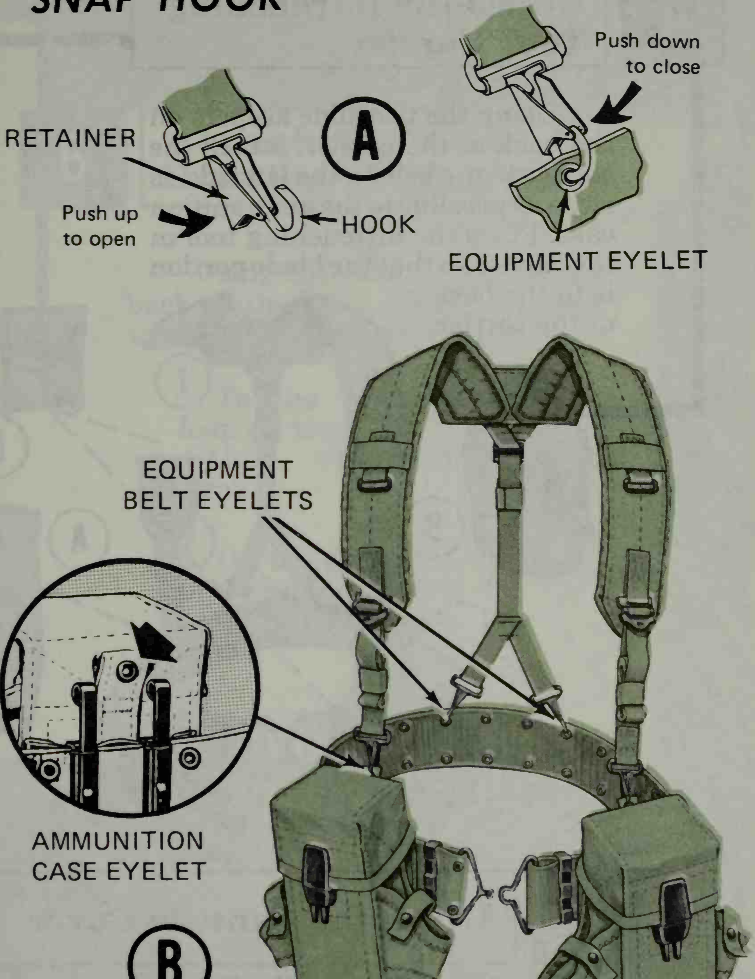
- Open all suspender snap hooks by pushing the hooks up and out of the retainers. Ⓐ

- Attach the back suspender snap hooks into the eyelet at each side of the two center top eyelets at the back of the equipment belt. Close the snap hooks. Ⓑ

- Attach the front suspender snap hooks to the eyelets on the back of the ammunition cases. Close the snap hooks.

- When the ammunition cases are not used, attach the front suspender snap hooks to the top eyelet on the side of each belt buckle and close the snap hooks.

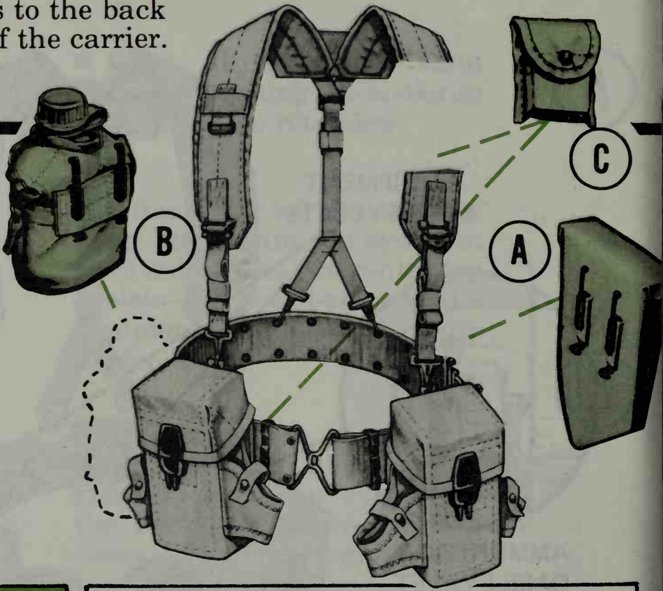
SNAP HOOK


A
RETAINER
Push up to open
HOOK
Push down to close
EQUIPMENT EYELET
EQUIPMENT BELT EYELETS
AMMUNITION CASE EYELET
B

Attaching suspenders to belt and ammunition cases.

4 Attach the Intrenching Tool Carrier

Using the two slide keepers on the back of the carrier, attach the carrier to the belt on the left side as close as possible to the ammunition case. Place the intrenching tool in the carrier so that the blade portion is to the back of the carrier.



5 Attach the Canteen Cover

Using the two slide keepers on the back of the canteen cover, attach the cover on the right side as close as possible to the ammunition case.

6

Attach the First Aid Dressing/Compass Case

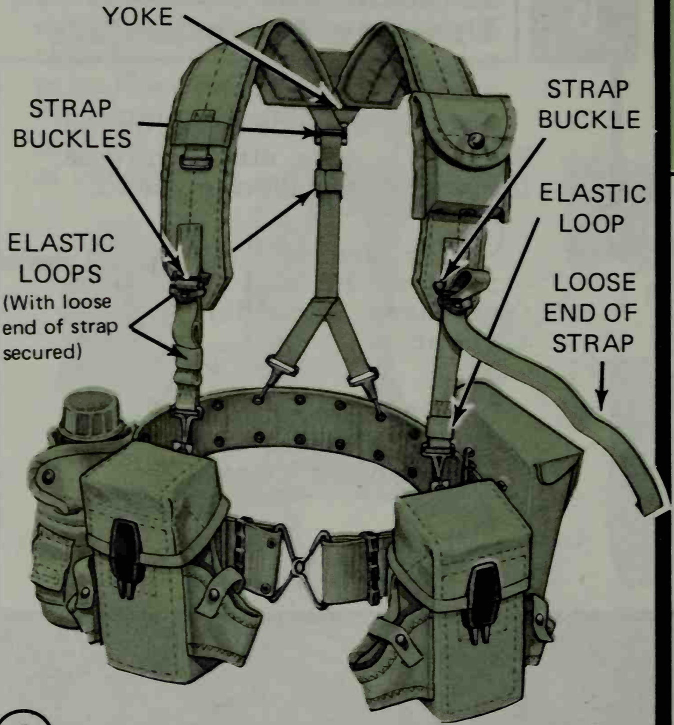
Using the slide keeper on the back of the case, attach the case in either of the following places:

① To the webbing loop on the front of either shoulder strap.

② On the right side of the belt next to the ammunition case.

7

Adjust the Front and Back Suspender Straps.


YOKE
STRAP BUCKLES
ELASTIC LOOPS
(With loose end of strap secured)
STRAP BUCKLE
ELASTIC LOOP
LOOSE END OF STRAP

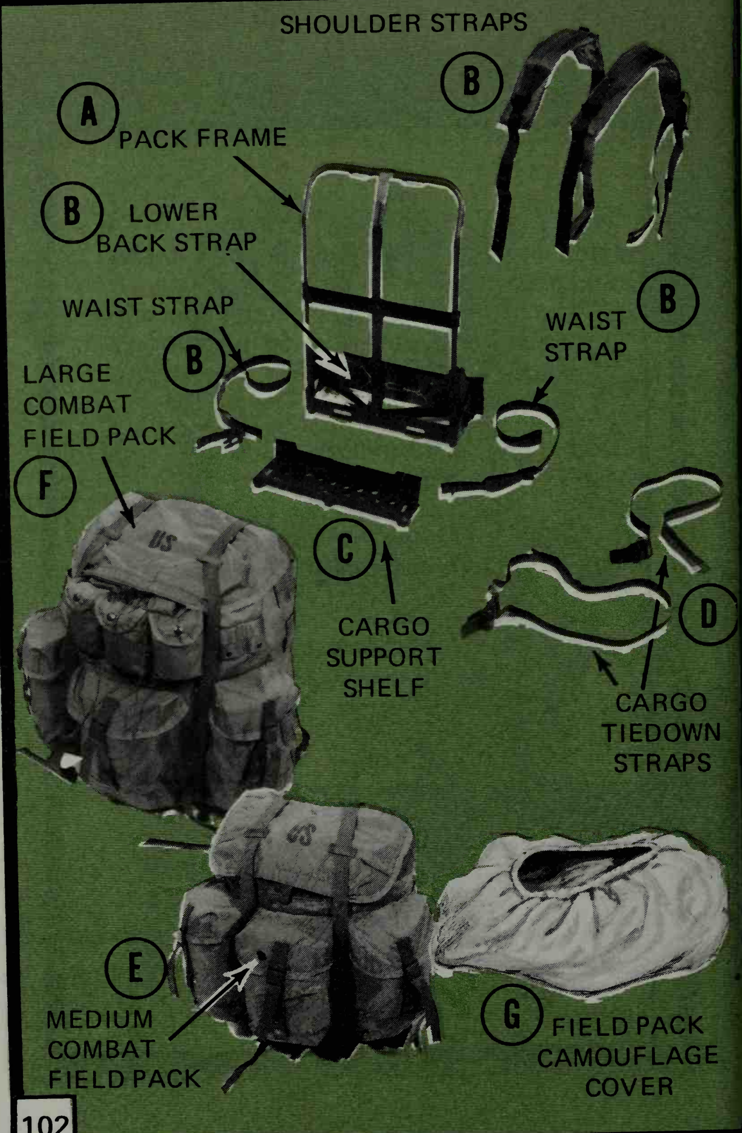
① After you have the equipment attached to the belt and suspenders, put it on and fasten the buckle.

② Adjust the length of the front and back suspender straps so that the belt hangs evenly at your waist and the yoke is positioned comfortably. To do this, proceed as follows:

- Pull down on the loose end of each strap to tighten (raise the belt) or lift the end of each strap buckle to loosen (lower the belt).
- Secure the loose ends of the straps with the elastic loops.

NOTE: *Although you can adjust the back suspender strap yourself, you can do it easier by using the buddy system.*

EXISTENCE LOAD COMPONENTS


SHOULDER STRAPS
B
A
PACK FRAME
B
LOWER BACK STRAP
WAIST STRAP
B
LARGE COMBAT FIELD PACK
F
B
WAIST STRAP
C
CARGO SUPPORT SHELF
D
CARGO TIEDOWN STRAPS
E
MEDIUM COMBAT FIELD PACK
G
FIELD PACK CAMOUFLAGE COVER

GROUND TROOPS PACK FRAME (A)

Use the ground troops pack frame as a mount for either the medium combat field pack or the large combat field pack. You may use the pack frame either with or without the cargo support shelf

PACK FRAME STRAPS (B)

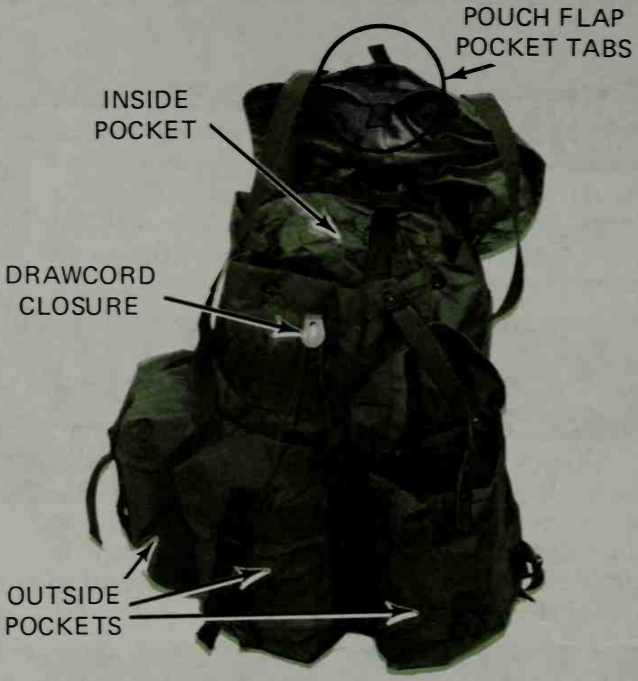
Straps attached to the pack frame consist of a lower back strap, waist straps, and two shoulder straps. A quick release device is attached to one of the shoulder straps and to one of the waist straps.

CARGO SUPPORT SHELF (C)

Use the cargo support shelf to support bulky loads such as water, gasoline, and ammunition cans; field rations; and radio.

CARGO TIEDOWN STRAPS (D)

Use the two cargo tiedown straps to secure equipment to the pack frame.


POUCH FLAP
POCKET TABS
INSIDE POCKET
DRAWCORD CLOSURE
OUTSIDE POCKETS

MEDIUM COMBAT FIELD PACK

Use the medium combat field pack to carry existence loads including clothing, rations, and personal items. The pack has a pouch with a drawcord closure, and three outside smaller pockets. These pockets are tunneled to the pouch so that long objects can be carried between the pouch and each pocket. The pouch also has a special inside pocket to carry the AN/PRC 25 or 77 radio, if necessary. The pouch flap has a pocket that can be opened by pulling two tabs apart. Small flat items can be carried in this pocket. Pressing the flap sides together closes it. Hangers are also provided to carry individual equipment or extra ammunition.

If the pack is not to be filled to capacity, before placing objects in the pack, shorten the pack using the tiedown cords and "D" rings inside the pouch.

The pack is usually carried directly on your back by transferring the shoulder straps from the pack frame to the pack, although you may carry it by attaching it directly to the pack frame.

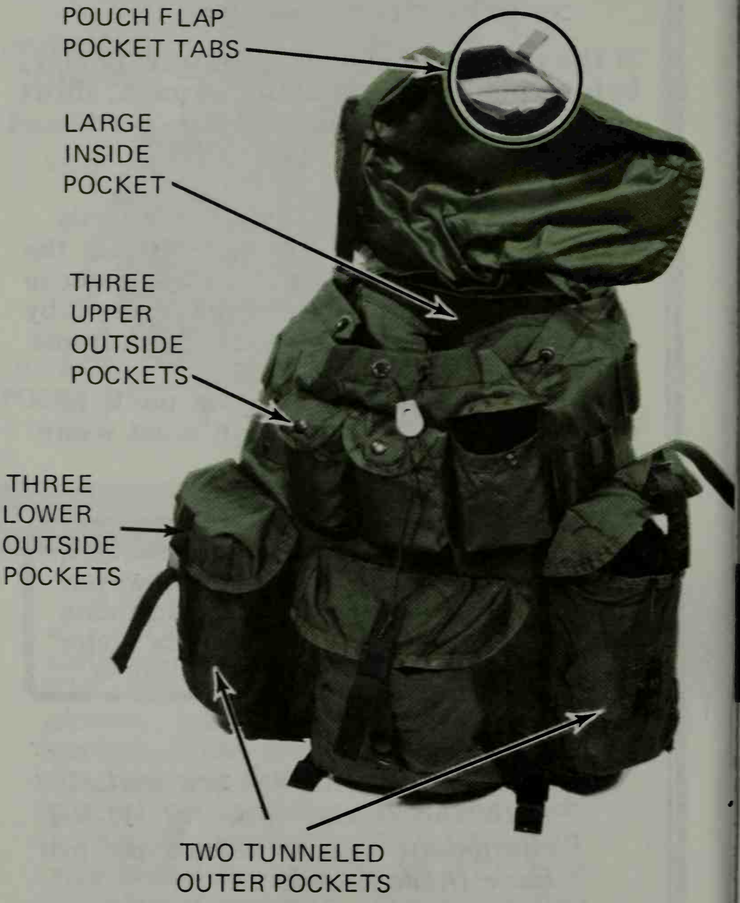
When you wear the medium pack in extreme cold climates, you must wear it on the frame.

The pack is water repellent, but not waterproof; however, it does provide adequate protection of contents under normal weather conditions.

NOTE:

Waterproof liners were included with the initial issue of ALICE equipment. Later issues do not have these liners.

LARGE COMBAT FIELD PACK

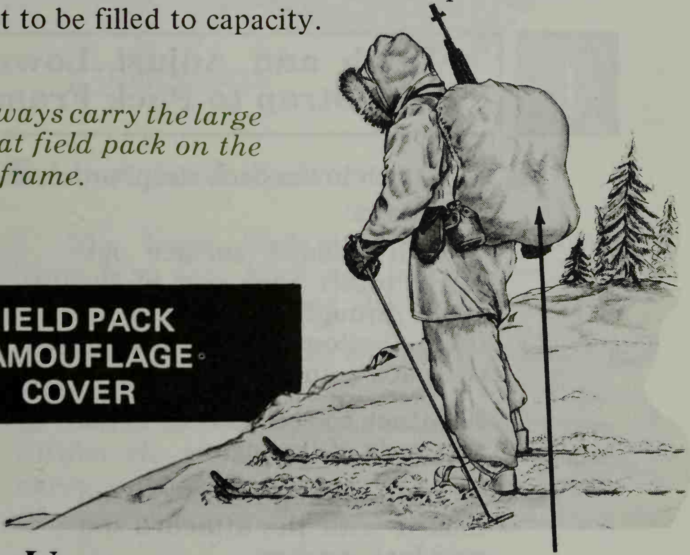

POUCH FLAP
POCKET TABS
LARGE
INSIDE
POCKET
THREE
UPPER
OUTSIDE
POCKETS
THREE
LOWER
OUTSIDE
POCKETS
TWO TUNNELED
OUTER POCKETS

Use the large combat field pack to carry excessively large loads - usually for special missions or in the arctic regions.

It is much the same as the medium combat field pack except that it is larger, and there are three more small pockets at the top of the pouch. Of the three lower outside pockets, the two outer ones are tunneled to the pouch so that long objects can be carried between the pouch and each pocket. As with the medium pack, tiedown cords and "D" rings inside the pouch can be used to shorten the pack if it is not to be filled to capacity.

- *Always carry the large combat field pack on the pack frame.*

FIELD PACK CAMOUFLAGE COVER



Use the white camouflage field pack cover to camouflage the olive green color of the field pack when operating in snow covered terrain.

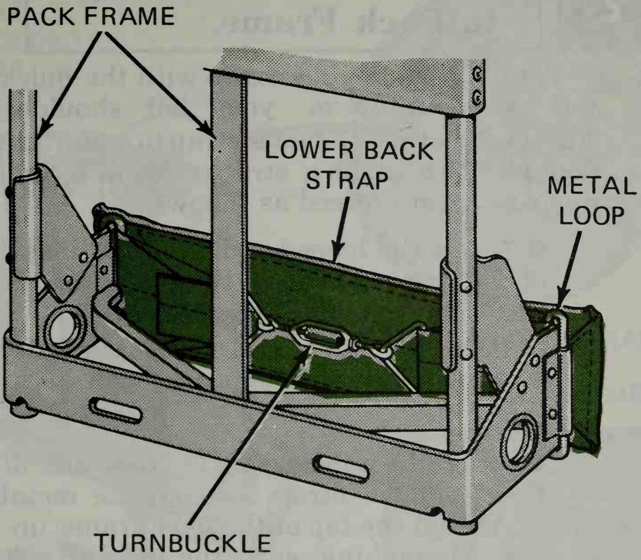
ASSEMBLY OF EXISTENCE LOAD COMPONENTS

Procedures for assembling the existence load components are described below. Certain components, such as the pack frame strap, may be issued already assembled.

Refer to TM 57-220 for parachutist's procedures.

1 Attach and Adjust Lower Back Strap to Pack Frame

- To Attach lower back strap, proceed as follows:
  - With padded surface outward, insert each end of the strap through the metal loops on the bottom crossmember of the pack frame.
  - Attach the turnbuckle to the two ends of the strap.
  - Tighten the turnbuckle and lock it with the attached nut and lock washer.


PACK FRAME
LOWER BACK STRAP
METAL LOOP
TURNBUCKLE

- Adjust lower back strap.

The lower back strap keeps the load away from your back and lets air circulate between your back and the load.

It is adjusted with the turnbuckle.

Tightening the turnbuckle causes the strap to be flat. If your waist is small, loosen the turnbuckle enough to allow the strap to curve in and fit against the lower part of your back.

2

Attach Shoulder Straps to Pack Frame.

Attach the shoulder strap with the quick release assembly to your left shoulder. Attach the other shoulder strap to your right shoulder. To attach a strap, refer to figure, opposite, and proceed as follows:

■ Insert the looped end, from the inside of the frame, through the plastic grommet to the outside of the frame.

□ Pass the other end of the shoulder strap through the loop and pull tight (inset C).

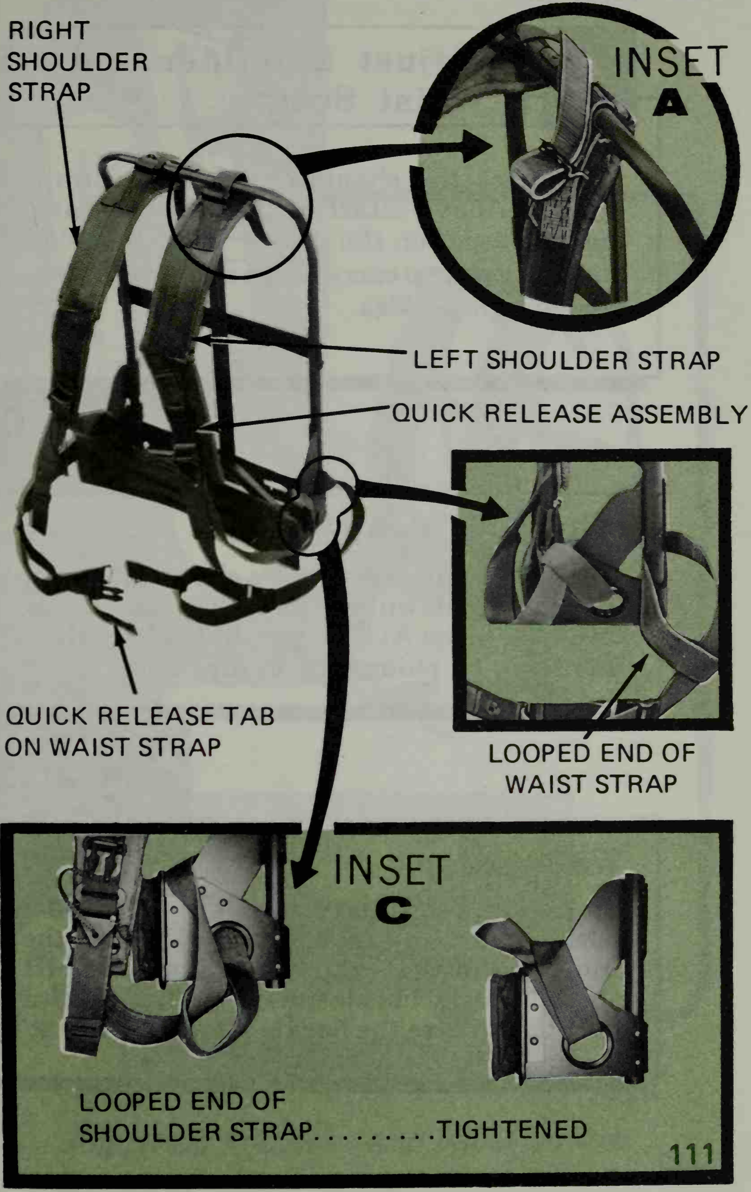
■ Insert the webbing of the loose end of the shoulder strap through the metal keeper on the top of the pack frame (inset A), making sure the padded side of the shoulder strap is facing inward.

■ Thread the webbing through the nonslip buckle and tighten.

Attach Waist Straps to Pack Frame.

3

Attach the waist strap with the quick release pull tab to either the left or right of the frame depending on which hand you use to pull the tab for quick release. Attach the other strap to the opposite side. To attach the waist strap, insert the looped end around the lower part of the frame, insert the other end through the looped end, and pull tight (inset B).


RIGHT SHOULDER STRAP
INSET A
LEFT SHOULDER STRAP
QUICK RELEASE ASSEMBLY
QUICK RELEASE TAB ON WAIST STRAP
LOOPED END OF WAIST STRAP
INSET C
LOOPED END OF SHOULDER STRAP.........TIGHTENED

4

Adjust Shoulder and Waist Straps

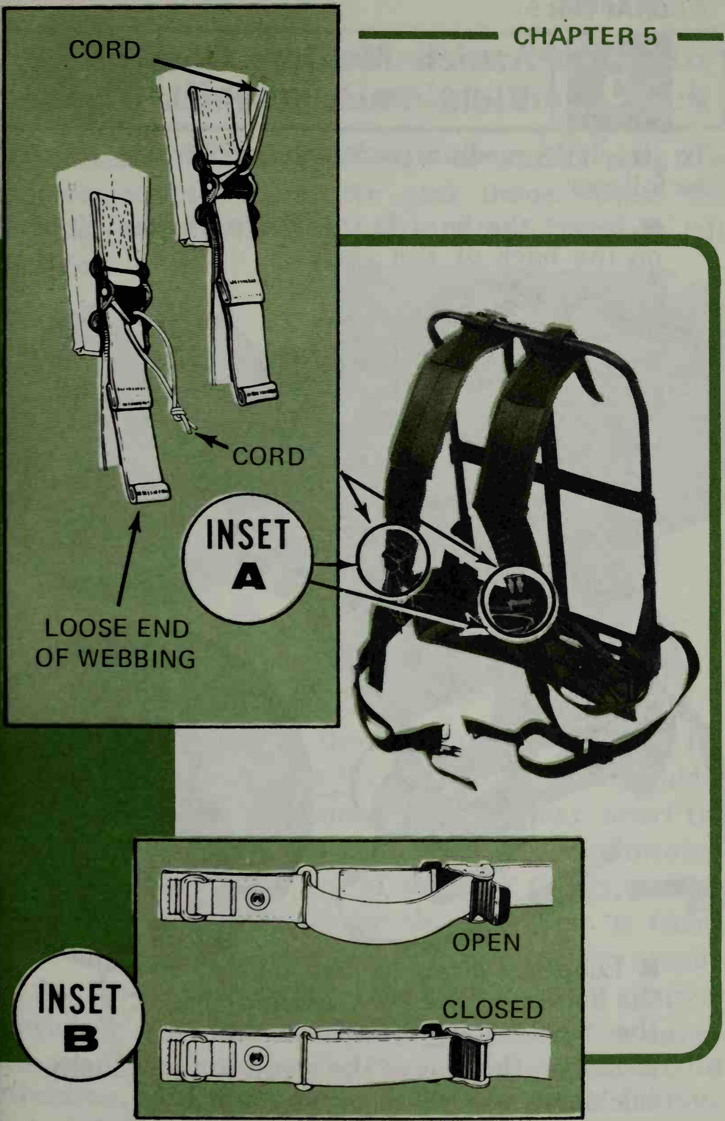
Adjust the shoulder and waist straps after you have attached them to the frame and have put on the frame with the load you are going to carry. Each set of straps has adjustment buckles.

Shoulder straps

To lift the load on your back, shorten the strap by pulling down on the loose end of the webbing (inset A). To lower the load, lengthen the strap by pulling up on the cord.

Waist straps

To tighten the waist straps, open the waist buckle (inset B) and slide it away from the front end of the strap. To loosen the waist strap, slide the buckle toward the front end of the strap. Close the buckle after adjustment.

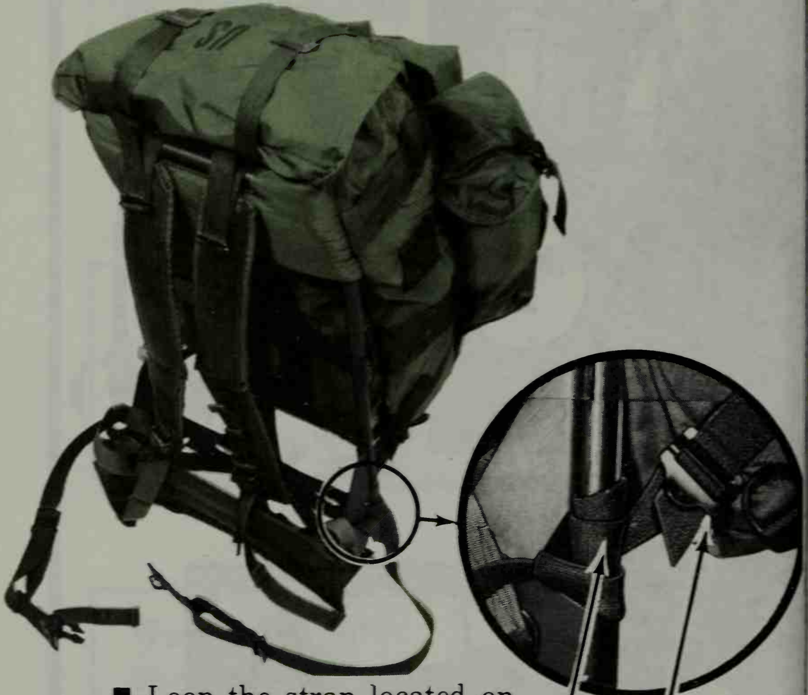

CORD
CORD
LOOSE END OF WEBBING
INSET A
OPEN
CLOSED
INSET B

Adjusting shoulder and waist straps.

5 Attach Medium Combat Field Pack to Pack Frame

To attach the medium pack to the pack frame, proceed as follows:

- Insert the bare frame into the envelope on the back of the pack.

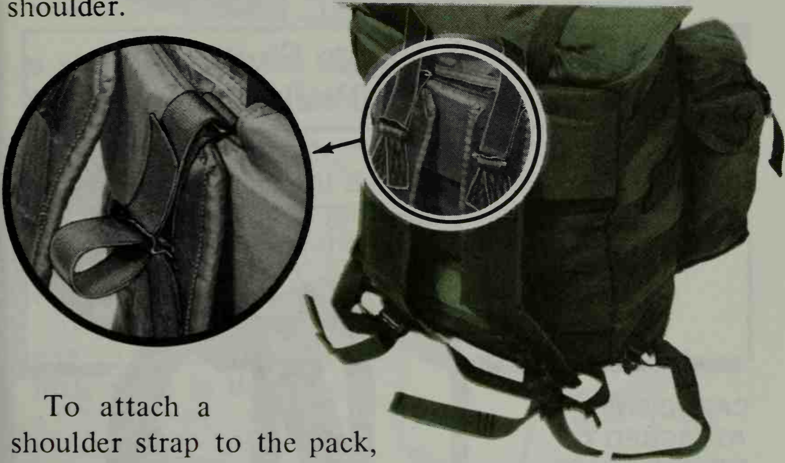


- Loop the strap located on the bottom of the pack around the frame twice (inset).
- Buckle the end of the strap to the nonslip buckle.
- Attach and adjust the shoulder straps and waist straps as previously described.

6

Attach Shoulder Straps to Medium Combat Field Pack

The medium field pack may be carried using the shoulder straps without the pack frame. Attach the shoulder strap with the quick release at your left shoulder.



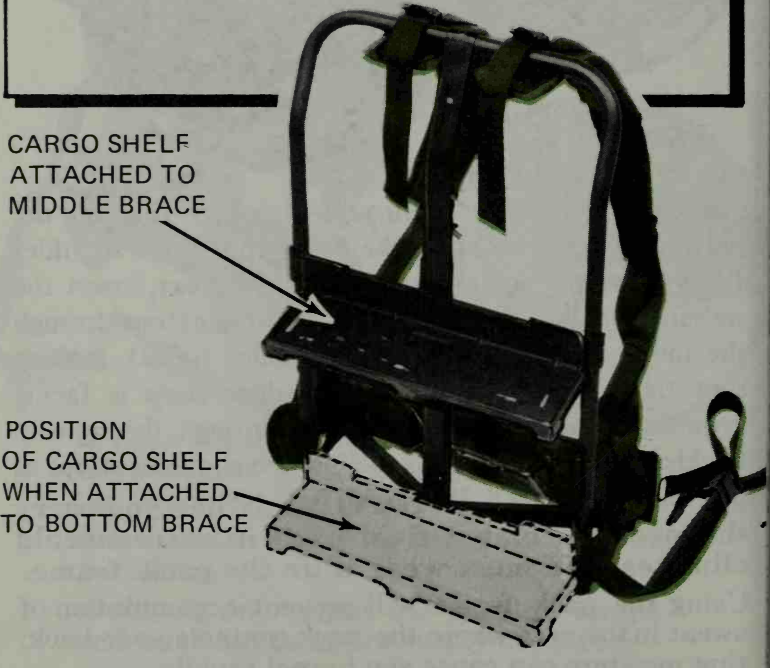
To attach a shoulder strap to the pack, insert the looped end through the "D" ring on the bottom of the pack, pass the other end of the shoulder strap through the loop and pull tight. Next, insert the webbing of the loose end of the shoulder strap through the metal loop at the top of the pack (inset), making sure the padded side of the shoulder strap is facing inward. Then thread the webbing through the nonslip buckle (inset) and tighten. Adjust the shoulder straps as previously described. ***WARNING:*** **When you carry the medium combat field pack in extreme cold climates, you must wear it on the pack frame.** Using the pack frame will prevent accumulation of sweat in the area where the pack contacts your back; this moisture can cause you to cool rapidly.

7 Attach Large Combat Field Pack to Pack Frame

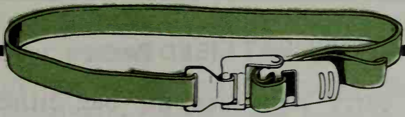
Use the same procedures to attach the large combat field pack to the pack frame as those used to attach the medium combat field pack.

8 Attach Cargo Shelf and Cargo to Pack Frame

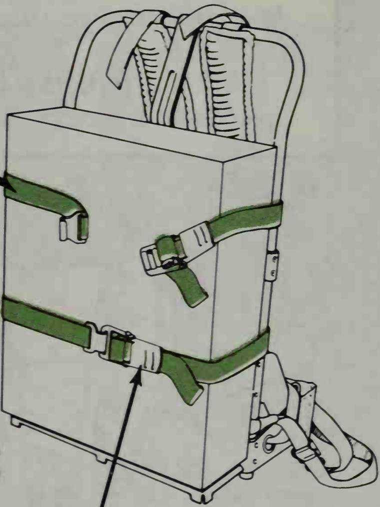
Cargo shelf. Attach the cargo shelf to the pack frame by hooking it onto either the middle or bottom brace of the frame as shown.


CARGO SHELF ATTACHED TO MIDDLE BRACE
POSITION OF CARGO SHELF WHEN ATTACHED TO BOTTOM BRACE

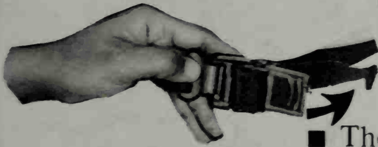
Cargo. Use the cargo tiedown straps to secure a load such as a 5-gallon can, ammunition case, field ration case, or radio to the pack frame.



- Wrap the tiedown strap around the load and the frame as shown.



- Place the flat hook end of the tiedown strap into the slot at the buckle as shown, and pull the loose end to tighten, leaving a little slack in the strap.



- Then push the fastener into the closed position as shown above. This takes up the slack and tightens the strap around the cargo.

CAUTION: ***Leave enough slack in the strap so that when you close the fastener, the strap will not fit too tightly around the cargo so as to crush it.***

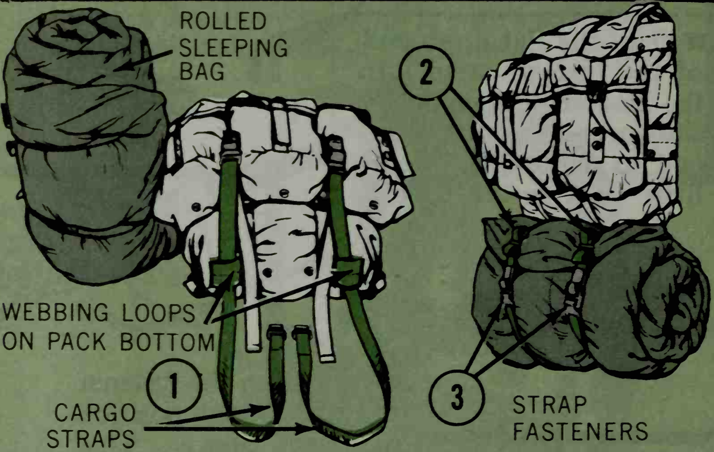
- Pull up on the end of the strap to open the fastener and loosen the strap.

9 Attach Sleeping Bag

● TO MEDIUM COMBAT FIELD PACK

☐ You can carry your sleeping bag either *inside the pack* or *attached to the outside of the pack.*

☐ To attach the bag to the outside of the pack, use the cargo tiedown straps (page 117).

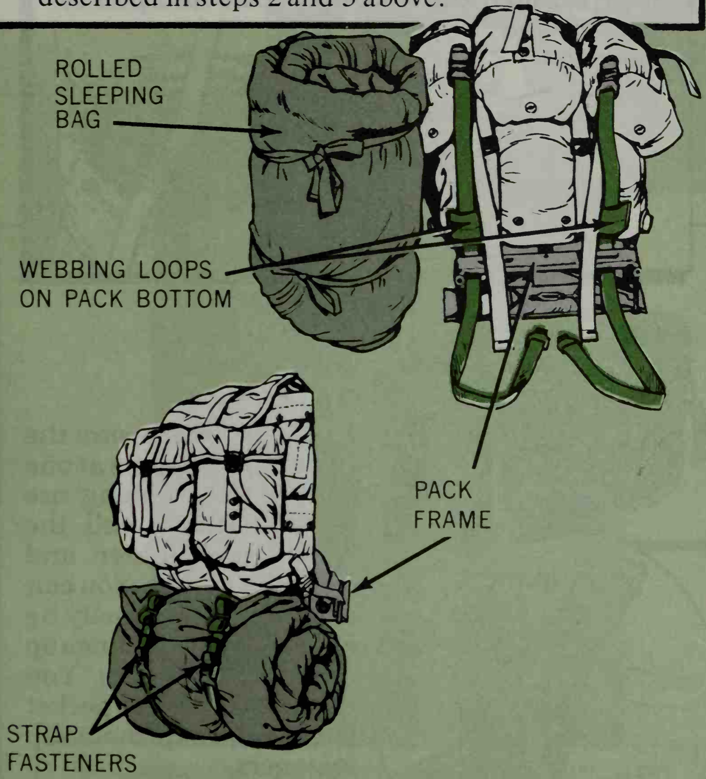

ROLLED SLEEPING BAG
WEBBING LOOPS ON PACK BOTTOM
1
CARGO STRAPS
2
3
STRAP FASTENERS

1 Pass the hook ends of the cargo tiedown straps through the webbing loops on the bottom of the pack.

2 Wrap the straps around the sleeping bag and attach the ends of the straps as shown.

3 Push the fasteners into the closed position and tighten the straps.

4 When you're using the pack frame with the pack, pass the cargo tiedown straps under and around the horizontal bar of the frame after passing them through the webbing loops on the bottom of the pack, then continue as described in steps 2 and 3 above.

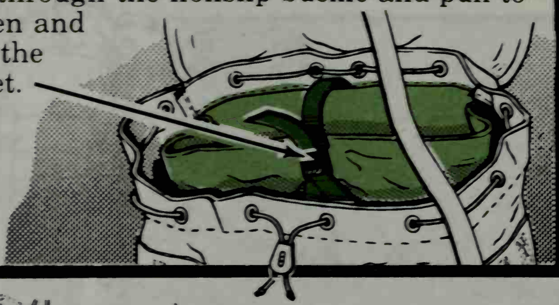

ROLLED SLEEPING BAG
WEBBING LOOPS ON PACK BOTTOM
PACK FRAME
STRAP FASTENERS

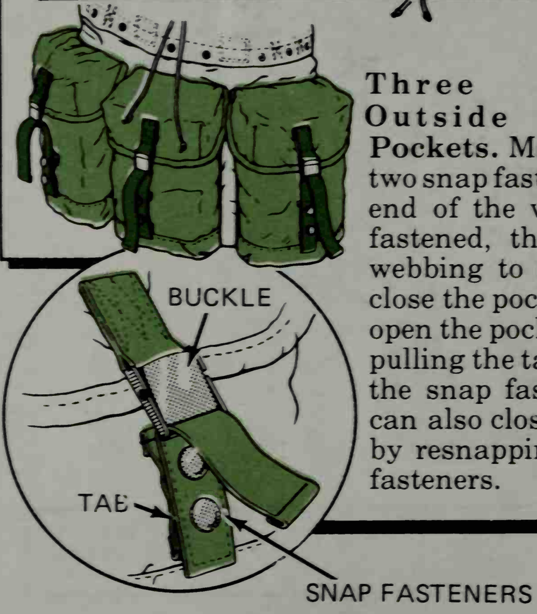
● Always carry the sleeping bag inside the large combat field pack.

COMBAT FIELD PACK CLOSURES

After either the medium or large combat field pack is loaded, close the pockets and pouch as follows:

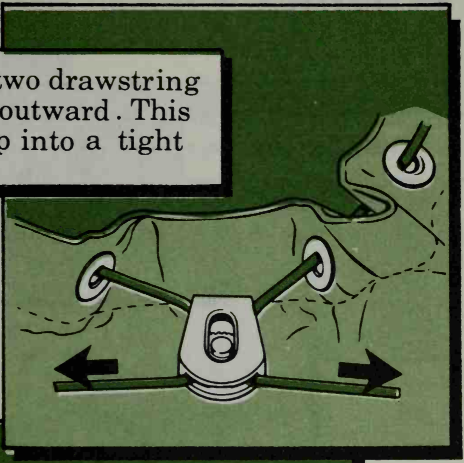
Inside (Radio) Pocket. Thread the webbing through the nonslip buckle and pull to tighten and close the pocket.

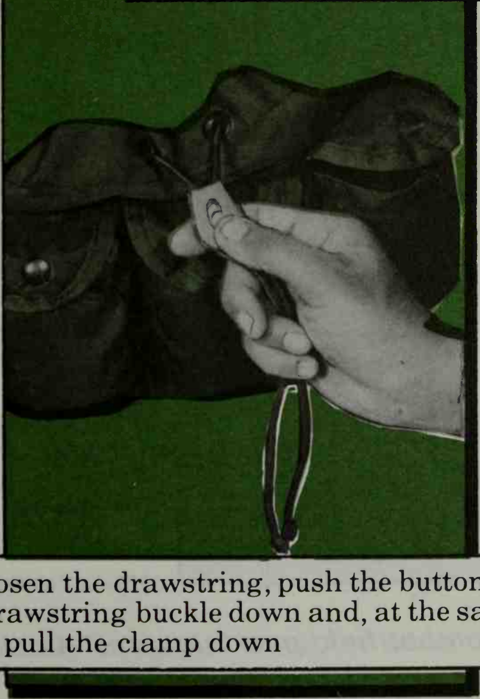




Three Outside Pockets. Make sure the two snap fasteners at one end of the webbing are fastened, then pull the webbing to tighten and close the pocket. You can open the pocket easily by pulling the tab to unsnap the snap fasteners. You can also close the pocket by resnapping the snap fasteners.

Pouch. Pull the two drawstring cord clamp ends outward. This will gather the top into a tight closure.

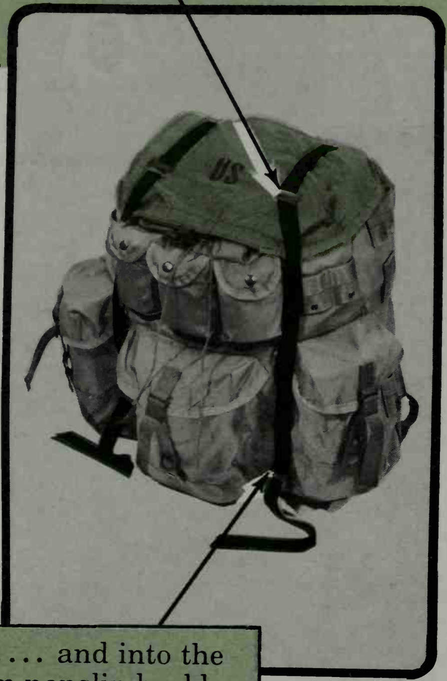




To loosen the drawstring, push the button on the drawstring buckle down and, at the same time, pull the clamp down

Pouch Flap

Insert the pouch flap tiedown strap through the web loop on top of the pouch flap, down over the pouch flap .....



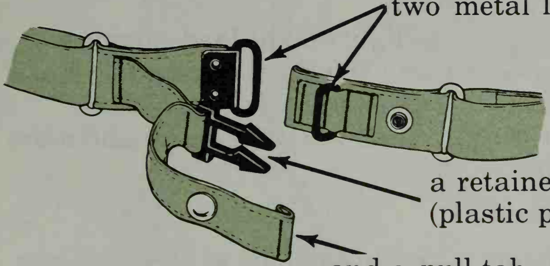
..... and into the bottom nonslip buckle. Pull tight.

Combat field pack closures (Continued).

QUICK RELEASES

Your back pack, with or without the pack frame, can be removed quickly by using the quick releases on the left shoulder strap and the waist strap.

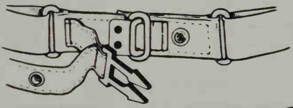
The quick release device consists of two metal loops,



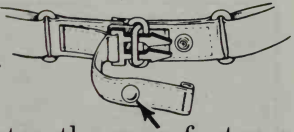
a retainer clip (plastic prongs),

and a pull tab.

● **Assembly.** To assemble the quick release device, place the large metal loop over the small metal loop.

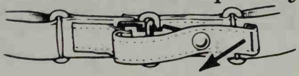


Then insert the retainer clip (prongs) through the smaller metal loop.



On the waist strap, fasten the snap fastener on the pull tab to protect the quick release device

● **Release.** To remove the load quickly, firmly pull the tab on the waist strap.



Then immediately pull up on the tab on the shoulder strap. Shift the load to your right and let it slip off your right shoulder.

LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (M-1956)

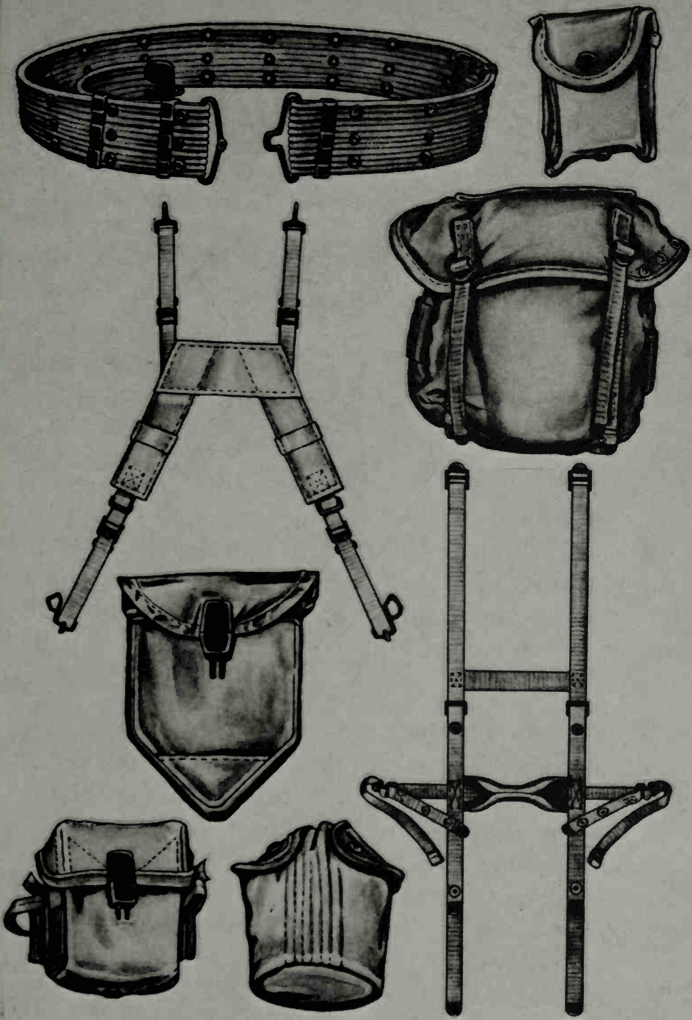
## ● General.

Your M-1956 lightweight load-carrying equipment consists of the items illustrated. Each item has been designed to make your job of carrying the equipment you need easier and more comfortable.

The items make up systems so that you can carry equipment needed for various field conditions.

Note.

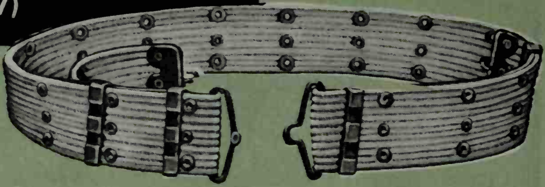
You can use this equipment in hot, temperate, and cold-wet regions and, with the *exception* of the combat field pack, in cold-dry arctic regions.



Components of M-1956 individual load-carrying equipment

COMPONENTS

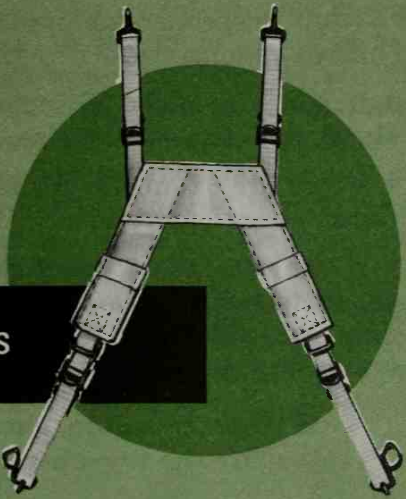
INDIVIDUAL EQUIPMENT BELT (M-67)



● **Use.** The individual equipment belt helps to support the field pack and carries the intrenching tool and carrier, ammunition pouches, canteen and canteen cover, and first aid or compass case.

● **Fitting.** The belt is issued in medium and large sizes so that it can be adjusted to fit over all layers of outer clothing, including the complete cold-wet ensemble and the armor vest.
If your bare waist measures less than 30 inches, wear the *medium* size.
If your bare waist measures 30 inches or more, wear the *large* size.

SUSPENDERS



● **Use.** Use the suspenders to support the field pack and the equipment belt.

The shoulder pads should be centered on your shoulders to distribute the weight of the load evenly.

The suspenders may be worn without the field pack. For this wear, attach the suspender straps *directly* to the equipment belt.

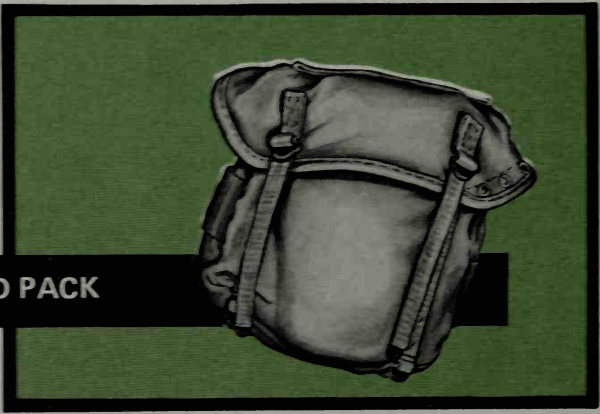
Release the front and rear keepers, and position them so that the suspender straps will place the belt evenly at your waist.

To keep the weight of the load evenly on both shoulders, attach the rear suspender straps at even spaces from the center of the rear of the belt.

Fitting. Suspenders are issued in regular, long, and extra-long sizes.

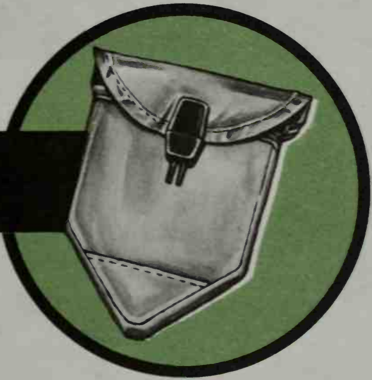
- If you are under 68 inches tall without shoes, wear the *regular* size.
- If you are 68 inches tall without shoes or taller, wear the *long* size.
- If you are tall or broad chested and you expect to wear the load-carrying equipment over cold-wet outer garments and/or the armor vest, wear the *extra-long* size.

When possible, check the size by the try-on method.



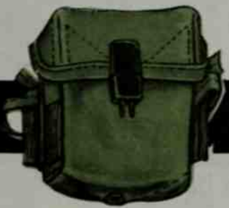
FIELD PACK

Use the field pack to carry rations and equipment essential for field operations. You can carry certain items in a number of different ways to suit changing conditions. For example, the poncho can be carried inside the pack under the expandable flap, or it can be attached to the bottom of the pack by means of the two adjustable securing straps. Extra items of small clothing, such as underwear and socks, can be rolled and placed under the expandable flap, as can outer clothing not is use. When you put items in the field pack, place *hard items* such as ration cans on the *outer side* and *soft items* such as clothing on the *inner side* toward your back. A series of eyelets at the edge of the pack flap will accommodate the double hooks used on old field equipment carriers for such items as wire cutters and machetes.



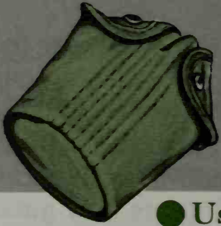
INTRENCHING TOOL CARRIER

Use the carrier to carry the collapsible intrenching tool.



AMMUNITION CASES

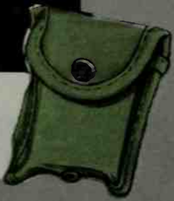
Use ammunition cases to carry any of the basic loads of ammunition, such as the M-14 and M-16 ammunition.



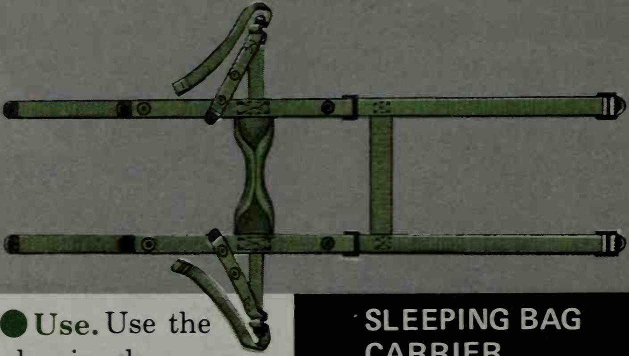
CANTEEN COVER

● **Use.** Use the canteen cover to carry the canteen and cup. If possible during hot weather, keep the inner lining of the cover wet to help cool the water in the canteen. *Keep the cover dry during cold weather* because the lining material provides some protection against freezing of the water in the canteen.

FIRST AID CASE



● **Use.** Use the first aid case to carry either a field dressing or an unmounted magnetic compass.



SLEEPING BAG CARRIER

● **Use.** Use the sleeping bag carrier to carry the sleeping bag and other sleeping equipment on your back.

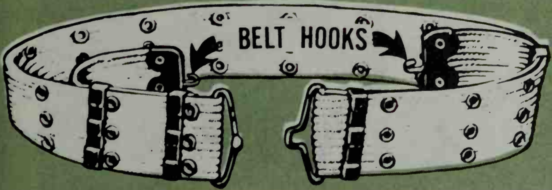
Assembly for Wearing Pack on Belt.

The procedure for assembling the individual load-carrying equipment with the field pack on the belt is described below.

NOTE: A different procedure must be followed when the equipment is assembled by parachutists when preparing for a jump. The parachutist's procedure is described in TM 57-220.

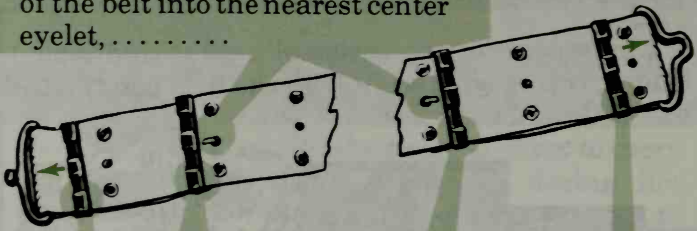
1 Fit and Adjust the Belt

Refer to the figure and proceed as follows:



- Unfasten the hook on each end of the belt from the center eyelet in which it is engaged, and shorten or lengthen the belt so that it fits around your waist just loose enough not to constrict your clothing.

■ Fasten the hook for each end of the belt into the nearest center eyelet, ...

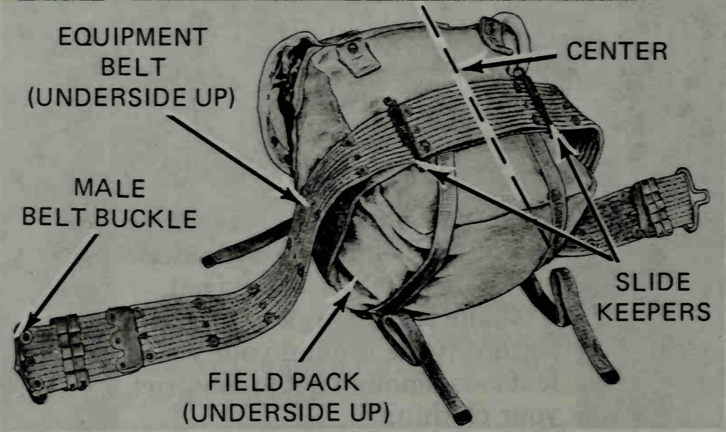


. . . . and move a metal keeper close to each hook to prevent the hook from unfastening.

■ Move the other metal keepers close to the male and female belt buckles

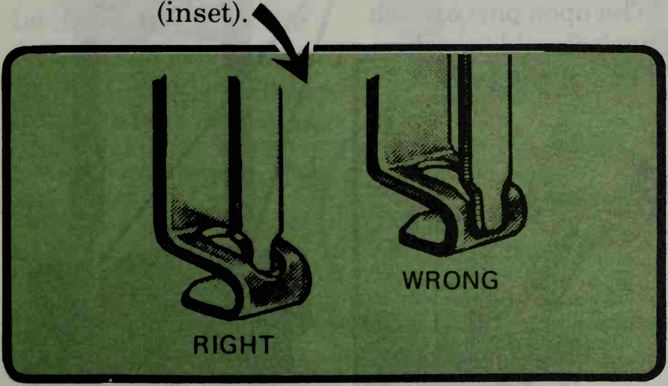
2

Attach Shoulder Straps to Pack Frame.


EQUIPMENT BELT (UNDERSIDE UP)
CENTER
MALE BELT BUCKLE
SLIDE KEEPERS
FIELD PACK (UNDERSIDE UP)

● Refer to the figure and proceed as follows:

- Lay the pack with the back facing up, the flap to the top, and the two slide keepers in an open position.
- Lay the belt out flat with the back facing up and the male belt buckle to your left.
- Locate the center of the belt, and insert the belt into the two open slide keepers of the pack so that the center of the belt matches the center of the pack.
- Close the two slide keepers of the pack, making sure that the tip of the sliding bar engages the hole in the bottom of the clip (inset).



Note. To avoid losing equipment, make sure all clips are attached properly.

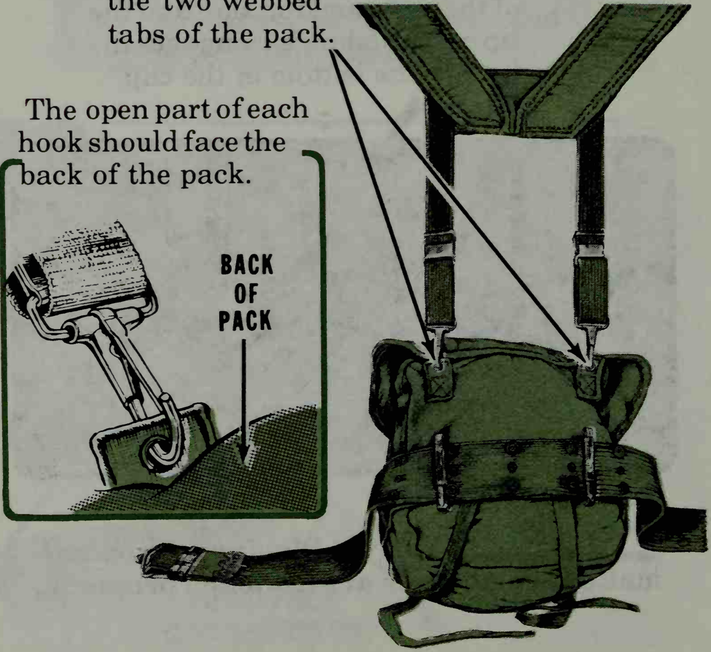
3

Attach the Suspenders to the Field Pack and Belt

- Refer to the figures and proceed as follows:

  - Lay the suspenders out flat, above the pack, with the inside facing up and the back suspender straps to the bottom.

  - Attach the back suspender straps to the pack by putting the hooks of these two straps into the eyelets of the two webbed tabs of the pack.

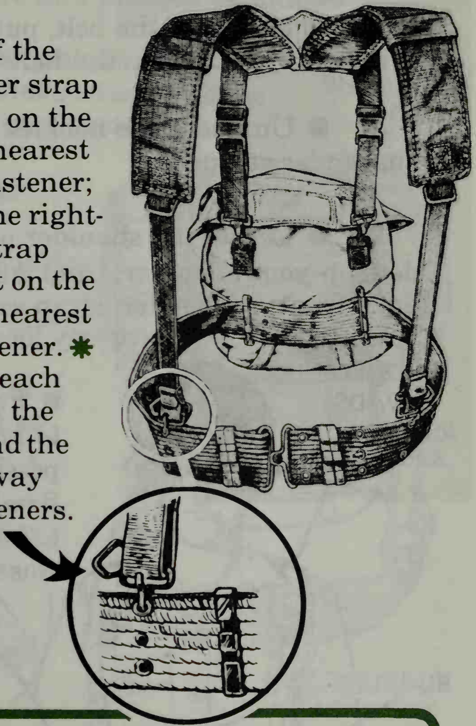


The open part of each hook should face the back of the pack.

- Attach the front suspender straps to the belt by first fastening the belt fasteners.

- Fold the suspenders back on the pack so that they lay with the outside of the suspenders facing up.

- Put the hook of the left-front suspender strap into the top eyelet on the front of the belt, nearest the female belt fastener; put the hook of the right-front suspender strap into the top eyelet on the front of the belt, nearest the male belt fastener. ✱ The open part of each hook should be to the front of the belt and the loop to the side away from the belt fasteners.



✱*Note.* **To prevent the equipment belt from "riding up" in front when the ammunition cases are empty or are partially filled, put the front suspender strap hooks in the top eyelets of the belt at the sides under your arms.**

4 Adjust the Front Suspender Straps.

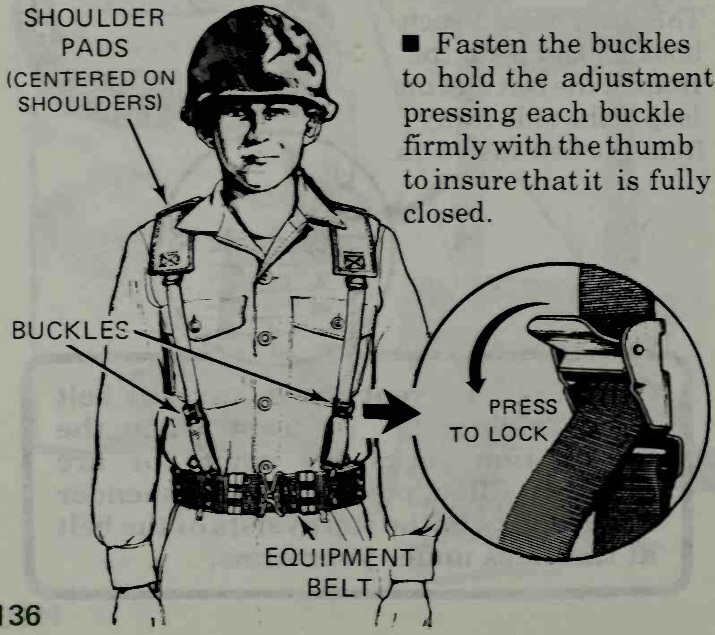
- Refer to the figure below and proceed as follows:

■ Unfasten the belt, put on the assembled equipment, and fasten the belt.

■ Unfasten the buckles on the two front suspender straps.

■ Center the shoulder pads of the suspenders on your shoulders, and adjust the length of each front suspender strap so that the belt is properly located at your waist.

■ Fasten the buckles to hold the adjustment, pressing each buckle firmly with the thumb to insure that it is fully closed.


SHOULDER PADS (CENTERED ON SHOULDERS)
BUCKLES
PRESS TO LOCK
EQUIPMENT BELT

5

Adjust the Back Suspender Straps

- Refer to the figure and proceed as follows:

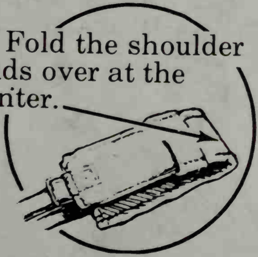
- Remove the assembled equipment, and place it on a flat surface with the inner side of the pack facing up.

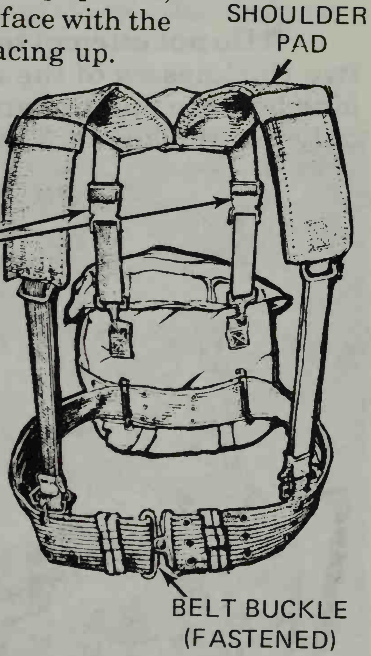
- Fasten the belt.

- Unfasten the buckles on the two back suspender straps.

- Locate the center of each shoulder pad of the suspenders.

- Fold the shoulder pads over at the center.





- Adjust the length of each back suspender strap so that the belt hangs evenly at front and back.

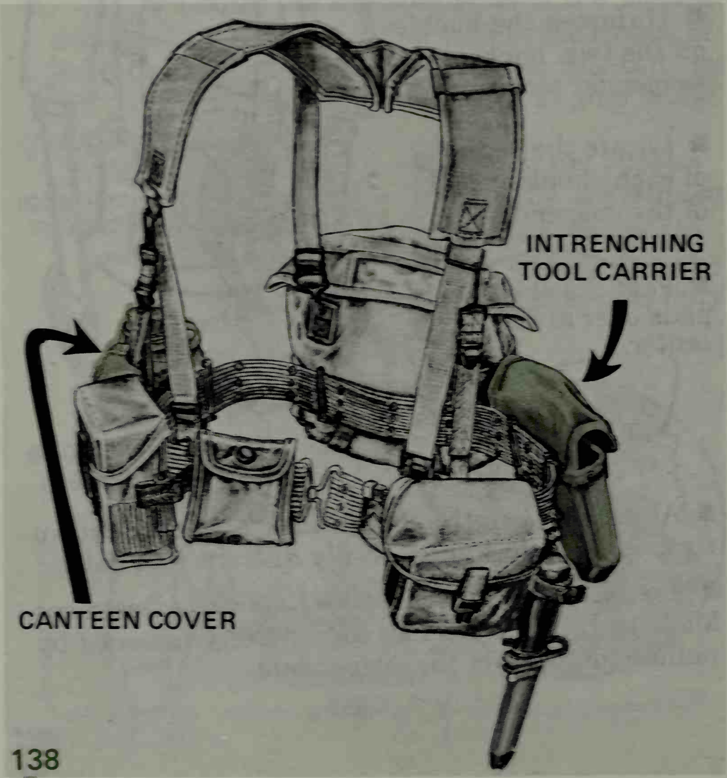
- Fasten the strap buckles to hold the adjustment. Make certain the buckles are properly fastened by pulling slightly on the suspenders.

6

Attach the Intrenching Tool Carrier

- Attach the carrier to the belt on the left side by means of the two slide keepers (attaching clips) on the back of the carrier.

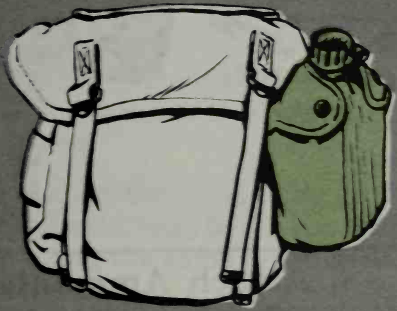
■ Do not attempt to insert the clips over two thicknesses of the equipment belt webbing because the clips are designed to fit over only one thickness of webbing.

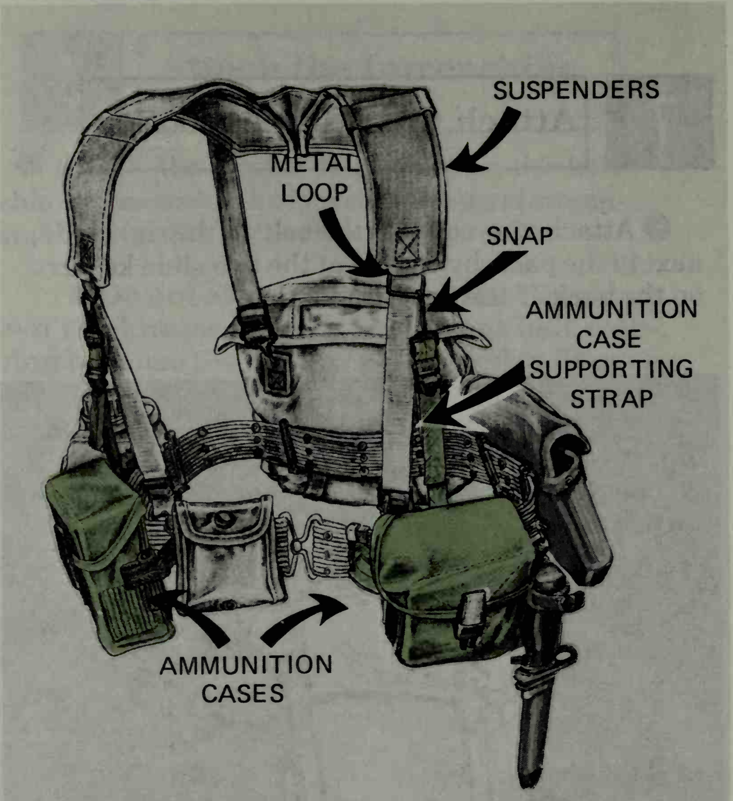

INTRENCHING TOOL CARRIER
CANTEEN COVER

7 Attach the Canteen Cover

● Attach the cover to the belt on the right side, next to the pack, by means of the two slide keepers on the back of the cover.

Note. Although the preferred position for the canteen cover is on the belt as described above, you may attach the cover to the right side of the field pack.




SUSPENDERS
METAL LOOP
SNAP
AMMUNITION CASE SUPPORTING STRAP
AMMUNITION CASES

8 Attach Ammunition Cases to the Belt

- Refer to the figure above. and proceed as follows:

- Attach one case to the belt on the left side, next to the intrenching tool carrier, by means of the two attaching clips on the back of the case.
- Unfasten the buckle of the supporting strap of the case.
- Attach the snap of the supporting strap of the case to the metal loop located at the bottom edge of the shoulder pad. **Make sure the strap is not twisted.**
- Adjust the length of the supporting strap so that is has the same amount of strain as the front suspender strap next to it.
- Fasten the buckle on the supporting strap to hold the adjustment.
- Attach another case to the belt on the right side, next to the canteen cover, using the same procedures described above.

Note.

To carry a pistol, attach the pistol holster to the belt in place of the ammunition case on the right side of the belt.

9

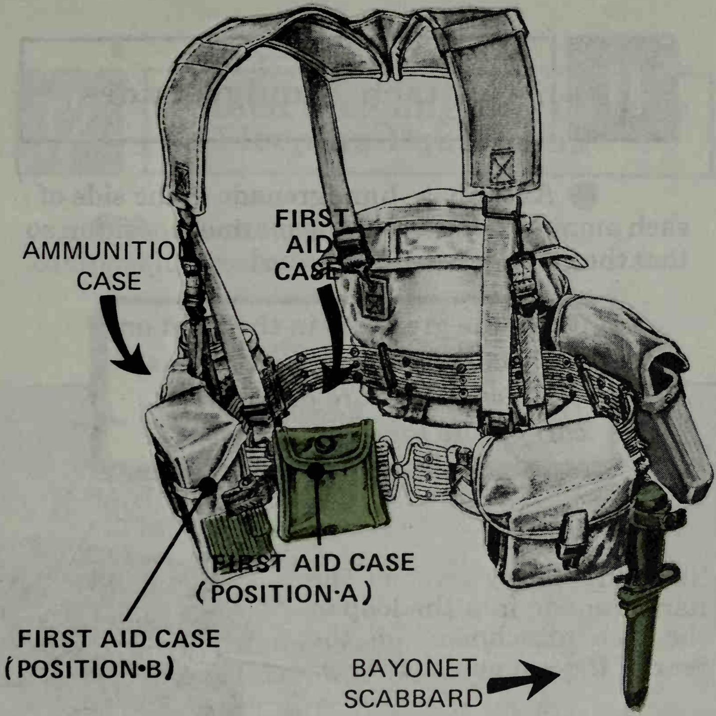
Attach the First Aid Dressing/Compass Case

- Attach the case for the first aid packet or lensatic compass in either of the following positions:

  Ⓐ To the belt in the front and on the right side next to the ammunition case. (**This is the recommended position.**)

  Ⓑ To the web loop on the left side of the right ammunition case.

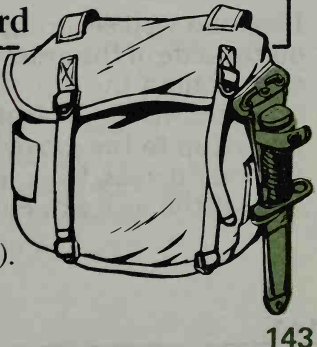
➡


AMMUNITION CASE
FIRST AID CASE
FIRST AID CASE (POSITION·A)
FIRST AID CASE (POSITION•B)
BAYONET SCABBARD

10

Attach Bayonet Or Bayonet-Knife Scabbard

- Fasten the double hook on the back of the scabbard into the two eyelets of the individual equipment belt (above) or in the eyelets on the field pack flap (right).

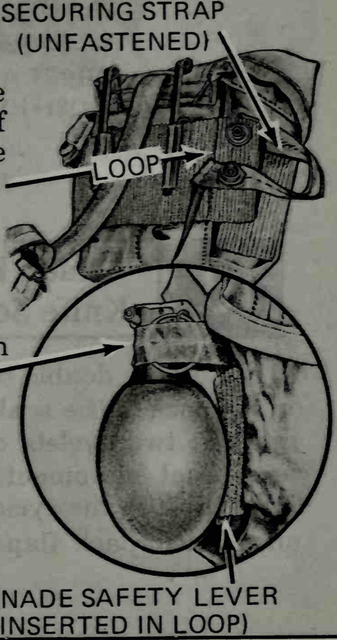


11

Attach Handgrenades

- Attach a handgrenade to the side of each ammunition case at the rearmost position so that the grenade is well protected.

> Carry the grenades in the front on the side of the ammunition case *only when you are authorized to carry more than two grenades.*


SECURING STRAP
(UNFASTENED)
LOOP
GRENADE SAFETY LEVER
(INSERTED IN LOOP)

Slide the safety lever of the handgrenade into the loop of the web attachment on the rear of the ammunition case.

Pass the web securing strap on the side of the ammunition case around the top of the handgrenade, and fasten the strap to the glove-type fastener on the back of the loop of the web attachment.

12 Attach Sleeping Bag Carrier to Sleeping Equipment

● To attach the carrier to the sleeping equipment, proceed as follows:

A ■ Lay the carrier out flat with the buckles of the two 1-inch-wide securing straps away from you and with the inside facing up.

B ■ Roll the sleeping equipment compactly and place it on the carrier directly on the top of the carrier handle.

C ■ Place the securing straps around the sleeping gear, buckle the straps, and pull the straps tight. Tuck the loose ends of the straps under.

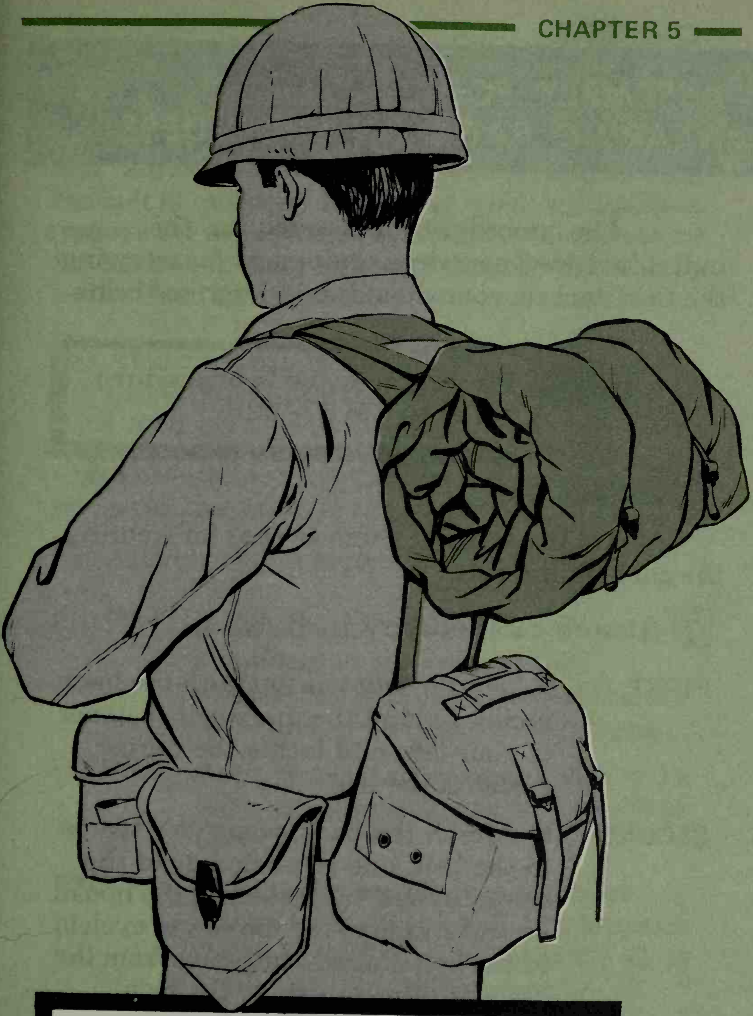
13 Attach Sleeping Equipment and Carrier to Suspenders.

- To attach the sleeping equipment and carrier for carry above the field pack, proceed as follows:

1 ■ Unfasten the snap fasteners on the two attaching straps of the carrier.

2 ■ Attach the two attaching straps to the suspenders by passing each one through the web keeper on top of the padded portion of the suspenders, through the metal loop located at the bottom edge of the padded portion of the suspenders, back over the top of the web keeper and then fasten the snap fastener of the attaching strap.

3 ■ Attach the two tiedown straps to the two front suspender straps by passing each one under the supporting straps of the ammunition cases, through the metal loop of the hook on the front suspender strap and then fasten the glove-type snap fastener.



4 ■ After assembled load is put on, adjust the length of the two tiedown straps so that the sleeping bag will be held firmly in position.

ASSEMBLY FOR WEARING PACK ON SHOULDERS

The procedure for assembling the individual load-carrying equipment for carrying the field pack on your shoulders is described below.

NOTE: For parachutist's procedure, refer to TM 57-220.

1 Adjust Belt.

Adjust the belt the same as that for wearing the pack on the belt.

2 Attach Suspenders to Belt.

FIRST. . . ■ Lay the belt out flat with the back facing up and the male belt fastener to your left, and locate the center eyelet of the belt.

SECOND. . ■ Attach the back suspender straps to the belt, one on each side of the center eyelet, by fastening the hooks on the straps to the top row of eyelets in the belt. Fasten the hooks from the inside to the outside of the belt.

THIRD. . . ■ Attach the front suspender straps to the belt by fastening the hooks on the straps to the eyelets nearest the belt fasteners at each end of the belt.

3 Adjust Suspender Straps.

● Put on the assembled belt and suspenders, and adjust the front suspender straps so that the belt is properly located at your waist. Then remove the equipment, and adjust the length of the back suspender straps so that the belt is even in the front and the back.

4 Attach Ammunition Cases, First Aid Case, Intrenching Tool Carrier, and Canteen Cover to Belt.

● These items are attached the same as when you wear the pack on the belt.

5 Attach Suspenders to Field Pack.

FIRST... ■ Attach the two snaphooks on the shoulders at the back of the suspenders into the eyelets of the two web tabs located on the field pack.

SECOND.. ■ Unfasten the two snaphooks of the back suspender straps from the belt eyelets.

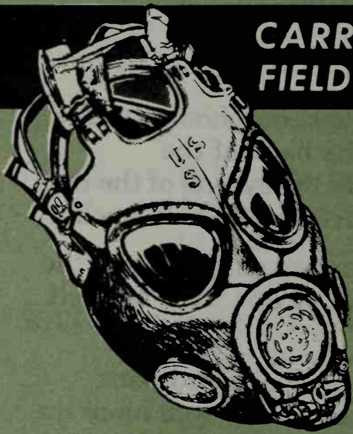
THIRD... ■ Pass the snaphooks and back straps through the two web loops on the field pack, and refasten the strap hooks into the belt eyelets.

6 Attach Bayonet or Bayonet-Knife Scabbard, Handgrenades, and Sleeping Bag Carrier.

● These items are attached the same as when you wear the pack on the belt.

7 Attach Sleeping Equipment to Pack.

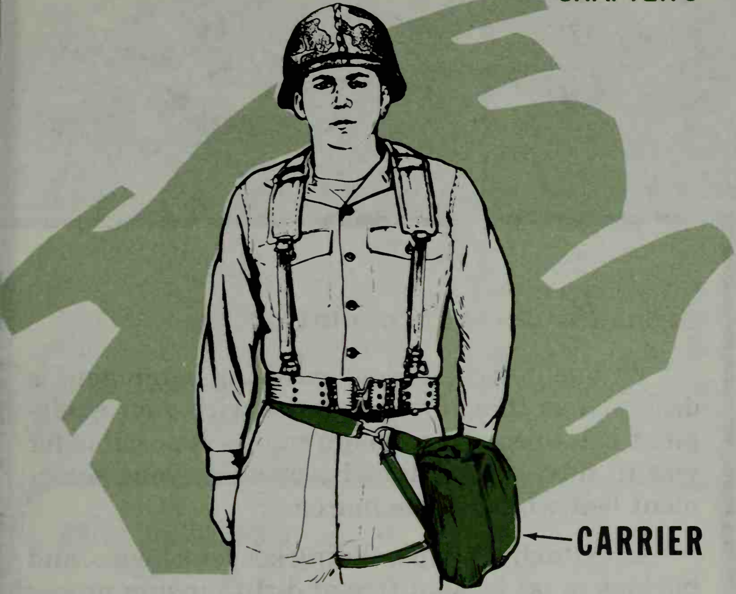
- If the sleeping equipment roll is small, attach it directly to the bottom of the field pack, with or without the sleeping equipment carrier, by using the pack straps.



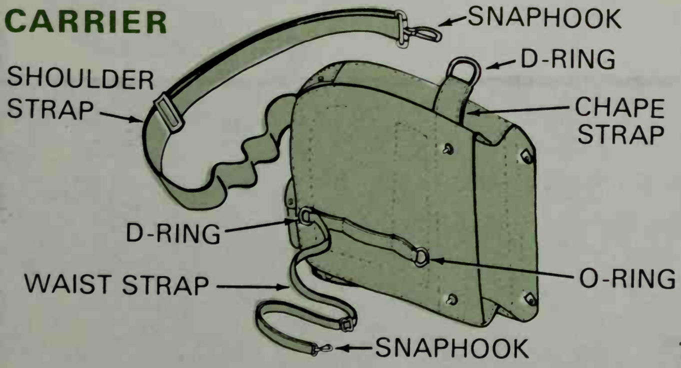
CARRY OF FIELD PROTECTIVE MASK

The recommended positions for carrying the field protective mask with the load-carrying equipment are as follows:

- The side-carry, with the shoulder strap over your right shoulder, the carrier and mask under your left arm, with the top of the mask placed in your armpit area; and the body strap fastened around your body.



- The leg-carry position, with the shoulder strap used as a waist strap, and the waist strap used as a leg strap. Refer to TM 3-4240-258-14 for details on strap arrangement for both the shoulder-carry and the leg-carry positions.


CARRIER
SNAPHOOK
D-RING
SHOULDER STRAP
CHAPE STRAP
D-RING
O-RING
WAIST STRAP
SNAPHOOK

Miscellaneous Information.

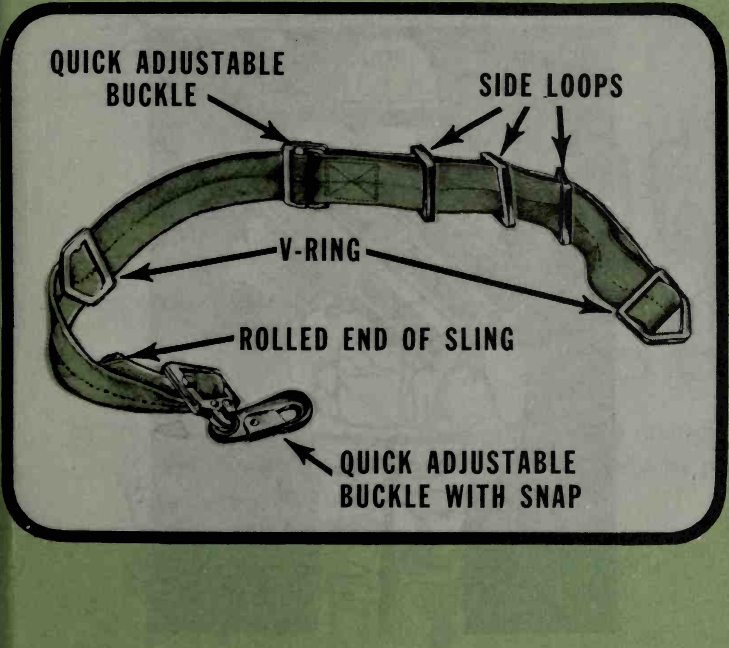
- The individual load-carrying equipment is designed so that it will balance with your equipment belt open. This design makes it possible for you to have ventilation by opening your equipment belt while on the march.

- Attaching clips, sliding keepers, hooks, and buckles must be kept free of dirt to insure proper operation of the equipment.

- The load-carrying equipment is **not** fire resistant. It can be quickly damaged by sparks from open fires or by drying it too close to a hot stove. Take special care, therefore, to protect the equipment from sparks and to dry it slowly.

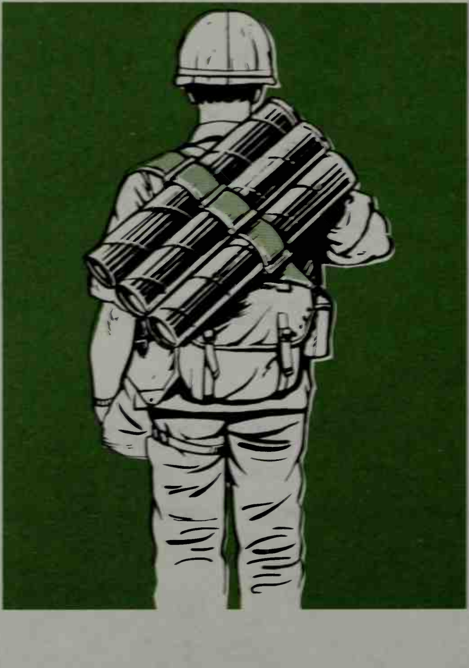
UNIVERSAL LOAD-CARRYING SLING

● **Description.** The universal load-carrying sling is an addition to the individual load-carrying systems when special loads are to be carried. *The adjustable sling is 1 $^3/_4$ inches wide and about 6 $^1/_2$ feet long.* It has lightweight hardware components, such as buckles, slide loops, and V-rings, which can be shifted to the position required to attach the various loads to be carried.


QUICK ADJUSTABLE BUCKLE
SIDE LOOPS
V-RING
ROLLED END OF SLING
QUICK ADJUSTABLE BUCKLE WITH SNAP

● **Use.** Use the sling to carry general utility loads, ammunition, and infantry-crew-served weapon loads in all climates **except arctic,** where it may have limited use. You can use the sling singly or in combinations of two or more and you can use it with the individual load-carrying equipment, depending upon the load to be carried. **Do not carry loads of over 35 pounds with each sling.** Instructions for assembling typical loads to the sling are as follows:

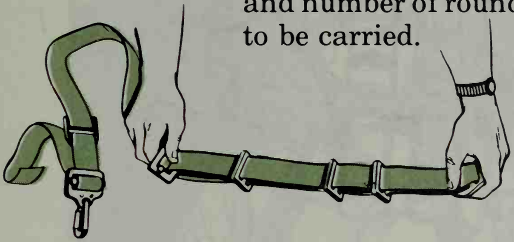
■ ***3.5-inch Rockets.*** A method for carrying 3.5-inch rockets is illustrated below.



To assemble the load illustrated, proceed as follows:

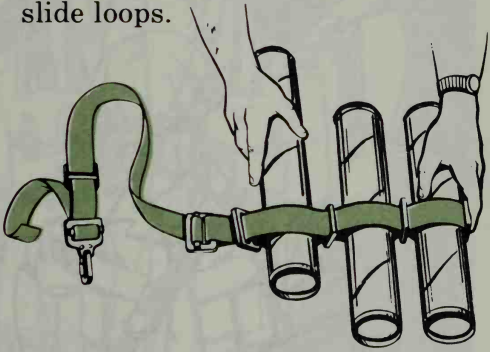
1

■ Adjust the loop end of the sling to the appropriate length for the size and number of rounds of ammunition to be carried.



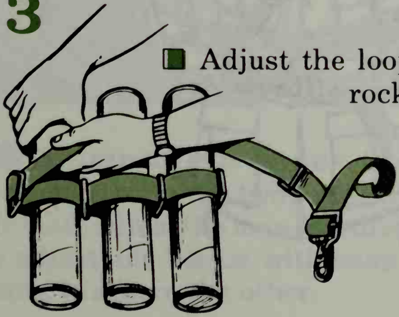
2

■ Place the rockets betweeen the slide loops.

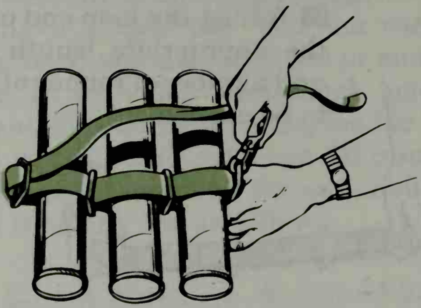


3

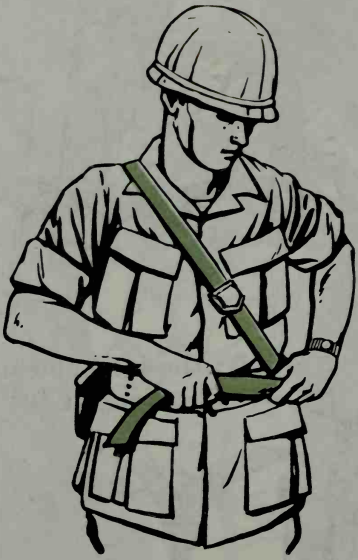
■ Adjust the loop end to secure the rockets firmly in place.

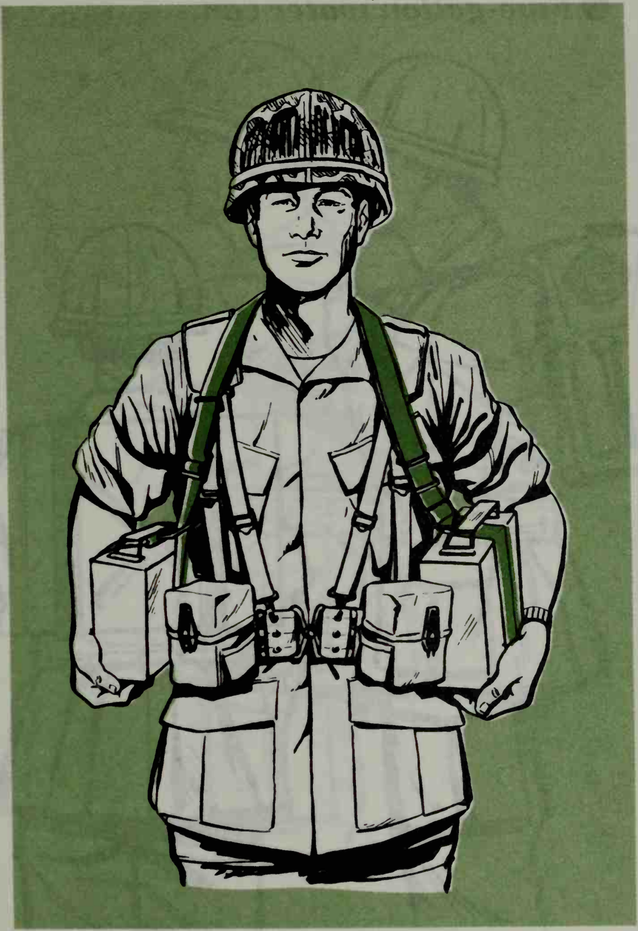


4 ■ Attach the adjustable buckle with snap fastener to the V-ring.



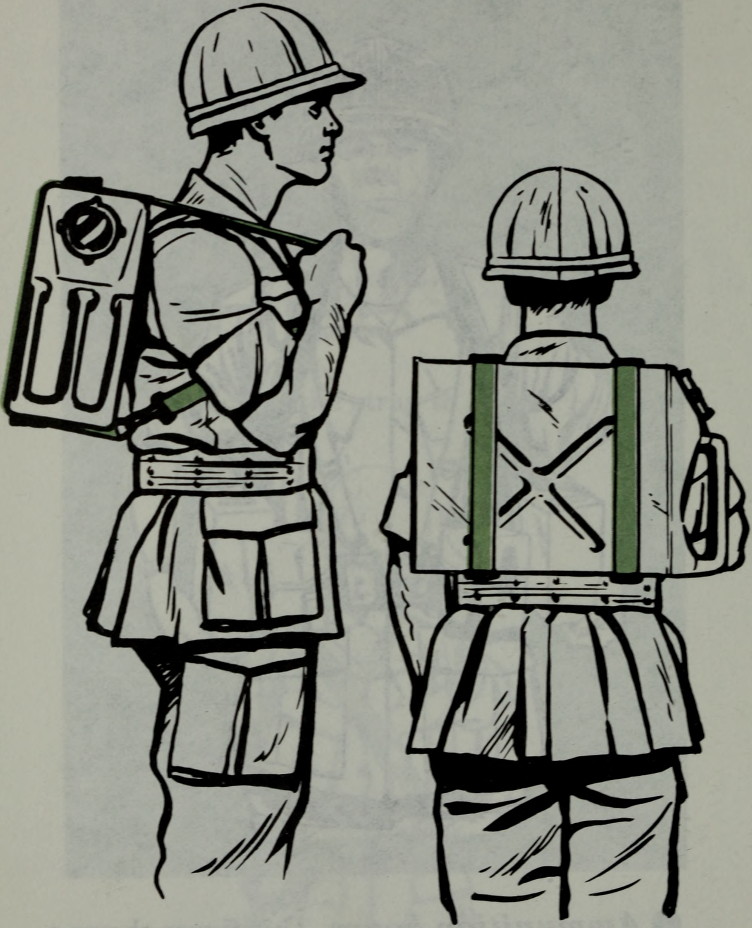
5 ■ Adjust the strap to fit you.





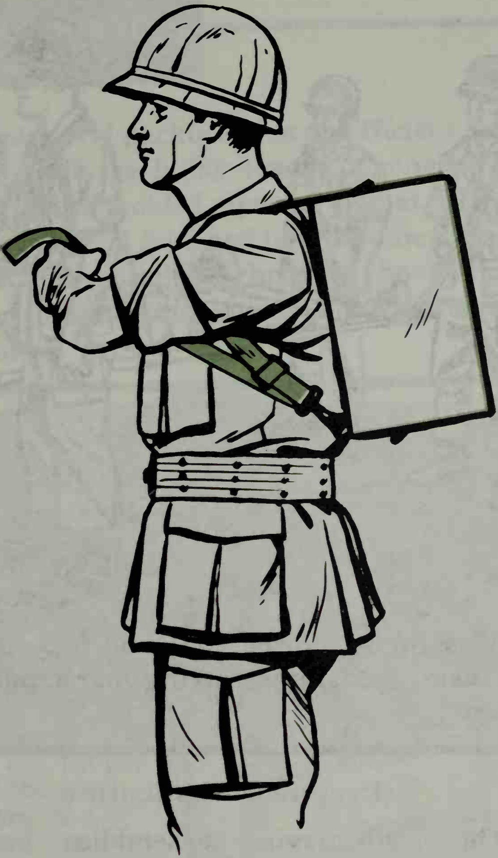
● ***Ammunition boxes.*** This figure shows a method for carrying two boxes of ammunition. For this load, adjust the loop end to secure one box; use the adjustable buckle with snap fastener and the V-ring to secure the other.

● *Five-gallon water can.*

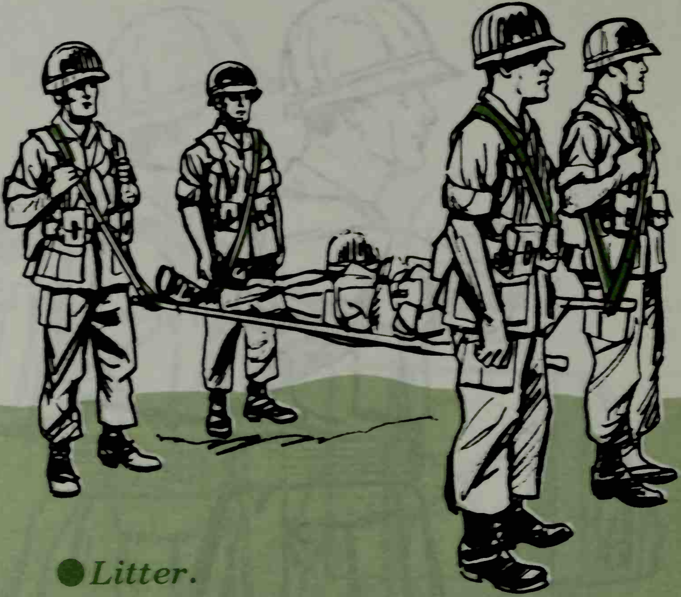


This figure shows a method for carrying a 5-gallon water can, using two slings.

- ***Rations.***



This figure shows a method for carrying a case of rations, using two slings.



● *Litter.*

This figure shows a method for carrying a litter, using four slings, leaving your hands free for other use.

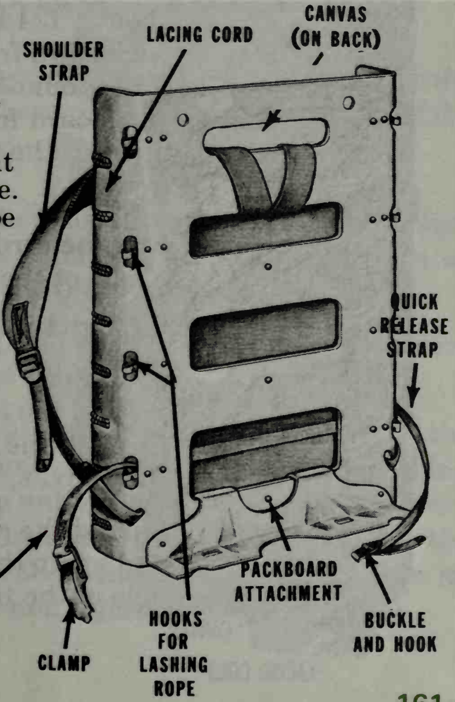
Practical Application.

The load-carrying assemblies previously described are typical of the many uses of the sling. Other uses should become apparent to you under field conditions. Just remember—the sling is for man-carry loads **only**, and should be used for no more than **35 pounds.**

PACKBOARD

The plywood packboard is an efficient means for carrying large bulky loads. It consists of a rugged frame of molded plywood bent at each side, a canvas backrest fastened to the frame by lacing cords, two packboard attachments, shoulder pads, a lashing rope, and quick-release strap and buckle assemblies.

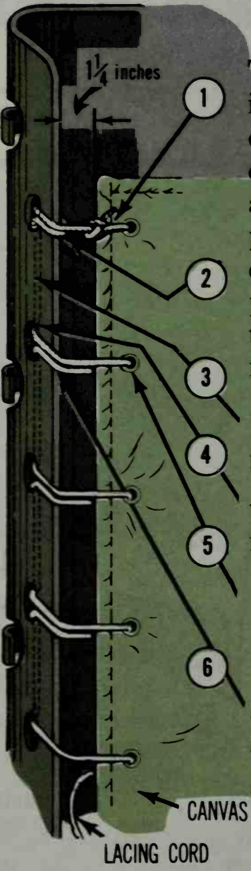
● **Use.** Use the packboard to carry loads of considerable weight or of irregular shape. Fifty pounds can be carried easily, and when necessary, more than 100 pounds can be carried. For proper carry of the packboard, the packboard canvas backrest should fit against your back, and the packboard frame should support the load.


SHOULDER STRAP
LACING CORD
CANVAS (ON BACK)
QUICK RELEASE STRAP
QUICK RELEASE STRAP
CLAMP
HOOKS FOR LASHING ROPE
PACKBOARD ATTACHMENT
BUCKLE AND HOOK

General Instructions.

■ Before fastening a load to the packboard, make sure the canvas backrest is properly laced to the frame.

☐ Lacing Canvas Backrest to Frame.



Tie the end of a lacing cord into the top eyelet on one side of the canvas. Hold the canvas so that its edge is about 1 1/4 inches from the packboard frame, and run the cord around the edge of the packboard frame and twice through the top hole of the frame.

Run the cord down along the inside of the frame,

through the second hole of the frame,

around the edge of the frame, through the second eyelet of the canvas,

around the edge of the frame, and again through the second hole of the frame.

⑦ Repeat the procedure until the cord reaches the bottom hole of the frame on one side.

⑧ Run the cord twice through the bottom hole of the frame and around the edge of the frame, and tie the cord to the bottom eyelet of the canvas.

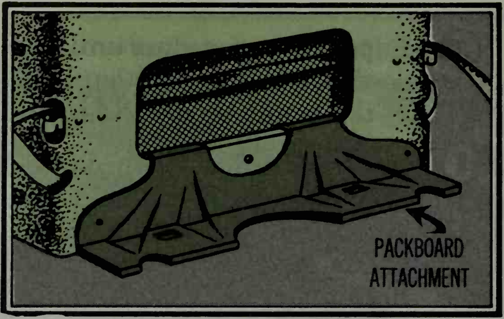
⑨ Be sure the edge of the canvas is about 1 1/4 inches from the frame all along the side of the packboard.

- Follow the above procedure to lace and tie the other edge of the canvas to the opposite side of the packboard frame.

- Tighten the lacings on the canvas before packing a load, and retighten them as often as necessary to keep the canvas taut.

To tighten lacings, twist the cord around a stick and pull the cord tight.

Lacings may also be tightened by placing the packboard frame on edge, gradually applying gentle pressure until the frame is slightly bowed, and then tightening the lacings. When the pressure is released, the frame will return to its original shape and tighten the canvas.



■ Use the packboard attachment to support heavy rigid loads at the bottom. To attach the packboard attachment to the packboard, place the flanges of the attachment over the lower edge of one of the openings in the frame.

■ Pack all loads so that they will be compact and can be carried high on your shoulders.

■ Fasten the load to the packboard with a lashing rope or a quick-release strap and clamp assembly. Attach bulky, nonrigid, or irregular-shaped loads with a lashing rope. Lashing by rope is easier if a short loop is tied in one end of the rope so that it may be attached to a hook on the packboard frame to start the lashing.

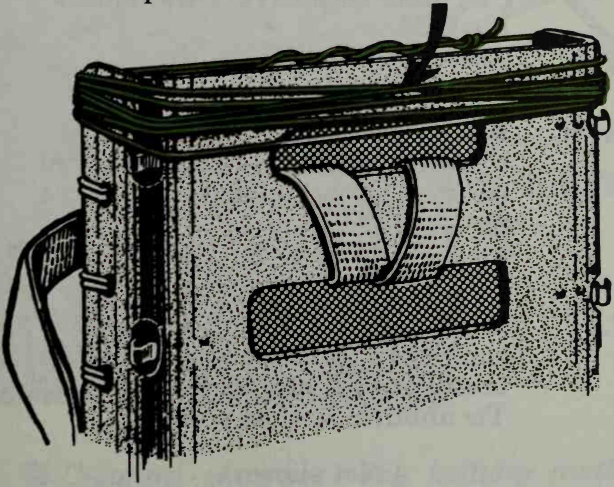
● *Always keep the lashing rope attached to the packboard.*

- Keep the lashing simple; *never use two loops when one will do.*

- Use knots that will hold but will not be hard to untie. When you can, use a bowline knot to form the loop in the end of the rope.

- After lashing the load, coil the loose end of the rope, and either fasten the coil with a knot or slip the coil between the canvas and the plywood frame.

- Keep the lashing rope wound around the top of the packboard when the packboard is not in use.



● Lashing Loads With Rope.

One method of lashing a load with rope, using four packboard hooks, is shown in the illustration and described below:

FIRST... ■ Form a loop in the rope, and place it over hook **AA.**

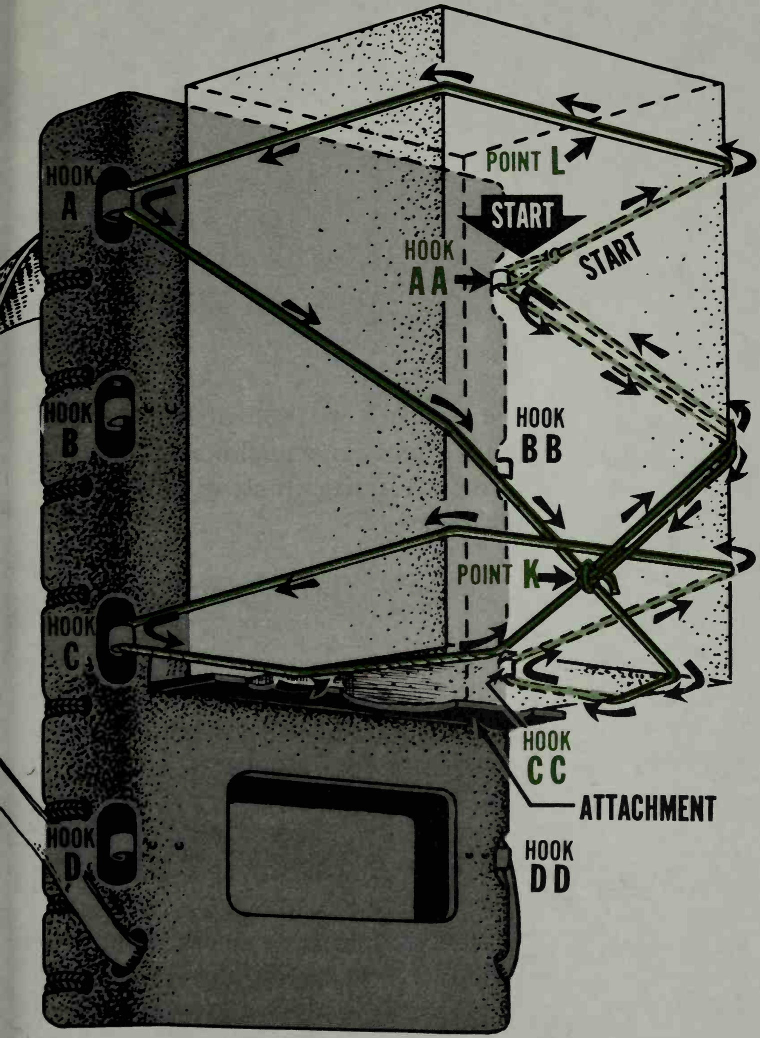
SECOND... ■ Run the rope across the load to hook **A.**

THIRD... ■ Run the rope diagonally downward across the load to hook **CC,** and back across the load to hook **C.**

FOURTH... ■ Run the rope back to hook **AA** as shown and then to point **K,** and secure the rope with a knot at point **K.**

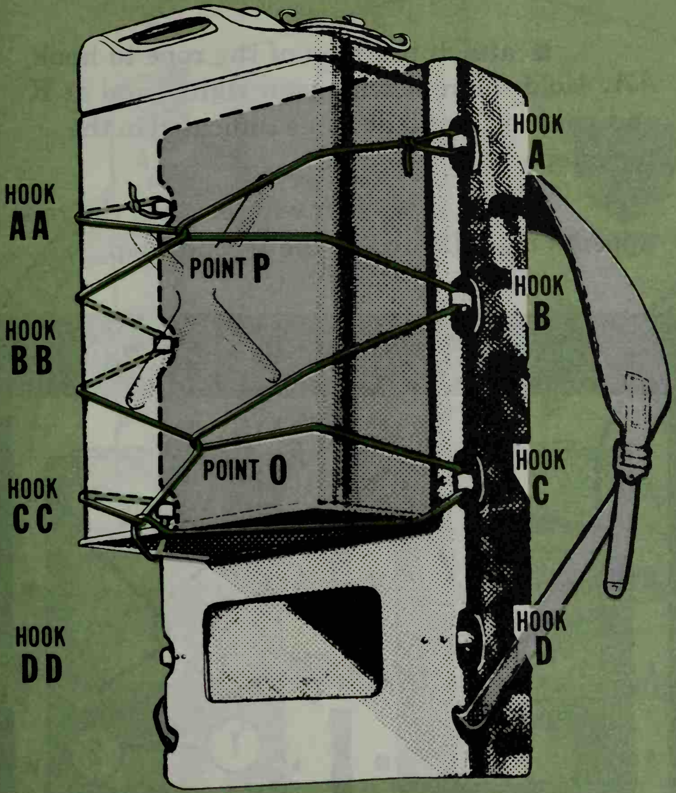
LAST... ■ To tighten the lashing, run the rope from the knot at point **K** up under point **L** and back to point **K.** Tie another knot at point **K.**

(Not shown).


HOOK A
POINT L
START
HOOK AA
START
HOOK B
HOOK BB
POINT K
HOOK C
HOOK CC
ATTACHMENT
HOOK D
HOOK DD

● *Diagram showing rope lashing method, using four packboard hooks*

■ Another method of lashing loads, using six packboard hooks, is shown in the illustration **on the facing page**.

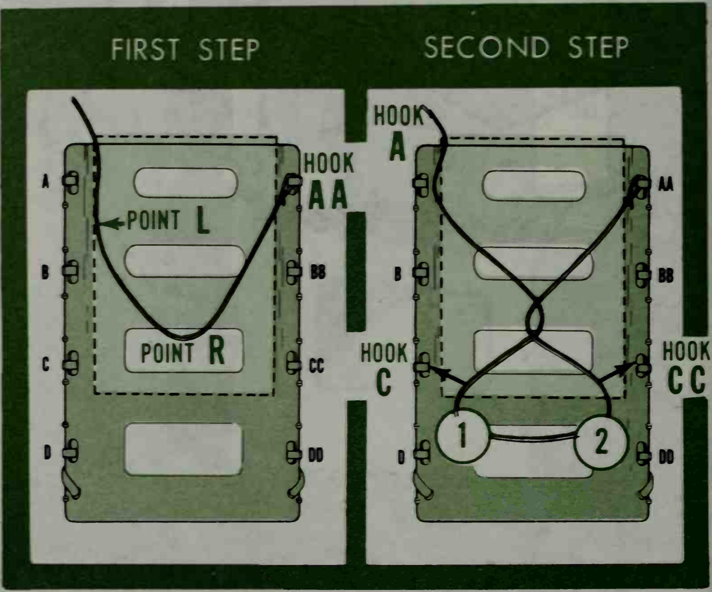

HOOK A
HOOK AA
POINT P
HOOK B
HOOK BB
POINT O
HOOK C
HOOK CC
HOOK D
HOOK DD

● *Diagram showing rope lashing method, using six packboard hooks*

When a quick lashing is required,

- attach the loop of the rope to hook **AA**. Hold the rope with your right hand at **R** and your left hand at **L**, as indicated in the first step.

- Then twist your wrist so that the rope appears as indicated in the second step.


FIRST STEP
SECOND STEP
A
B
C
D
POINT L
POINT R
HOOK AA
BB
CC
DD
HOOK A
AA
B
BB
HOOK C
HOOK CC
1
2
D
DD

On the resulting lower loop of the rope, fasten points ① and ② to hooks C and CC of the packboard. Tighten the rope and tie it securely at A.

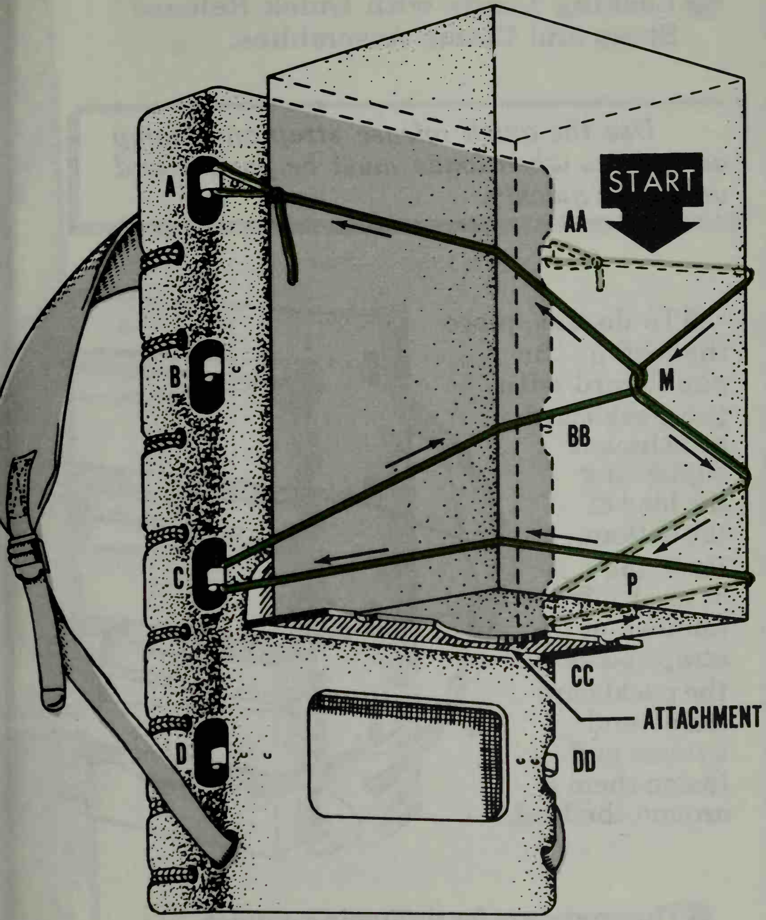
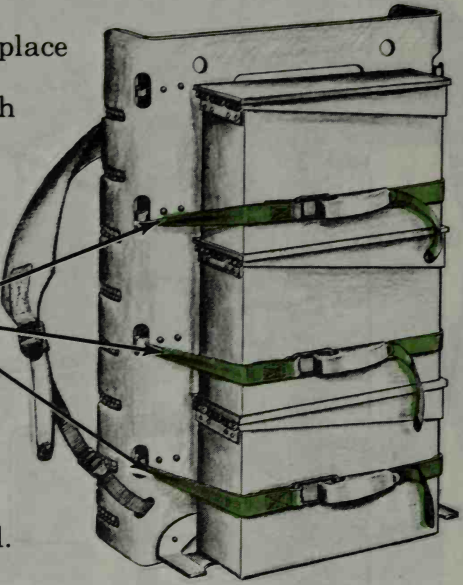

START
A
AA
M
B
BB
C
P
CC
ATTACHMENT
D
DD

Diagram showing quick-lashing method

● Lashing Loads with Quick Release Strap and Clamp Assemblies.

Use the quick release strap and clamp assemblies when loads must be packed and unpacked quickly.



■ To do this, place the load on the packboard with the packboard attachment supporting the load at the bottom. Pass the desired number of straps between the packboard frame and canvas and fasten them around the load.

■ The procedure for tightening a quick release strap and for closing and releasing a quick release clamp is illustrated on the facing page.

● Carrying.

■ When using shoulder pads, place each shoulder strap through the two loops on the surface of one of the shoulder pads. Adjust the shoulder straps so that the packboard will rest high on your back.

■ If the packboard is not heavily loaded, sling it on your shoulders as you would any other pack, and adjust the shoulder pads for comfort.

■ If the packboard is heavily loaded, place the loaded packboard upright on the ground, Sit with your back against the canvas, and place your arms through the shoulder straps. To mount the load, roll over on your hands and knees, and stand up.

■ When you wish to attach the packboard to your waist, pass a spare quick release strap and clamp assembly through the bottom holes on each side of the packboard frame and fasten the buckle at the front of your body.

● Care.

■ Mend or repair damaged fabric components before the damage becomes serious. When fabric becomes soiled, wash and sun it; scrape off caked mud before you wash the fabric.

The canvas will need more frequent washing and sunning than the shoulder straps.

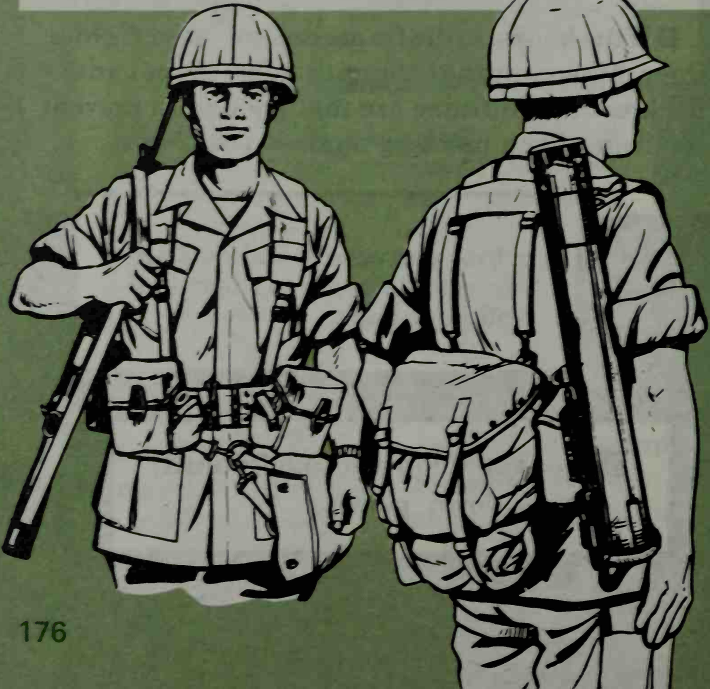
■ If the hooks on the frame become loose, tighten them. Make sure the lacings that fasten the canvas backrest to the frame are taut enough to prevent the frame from pressing against your back;

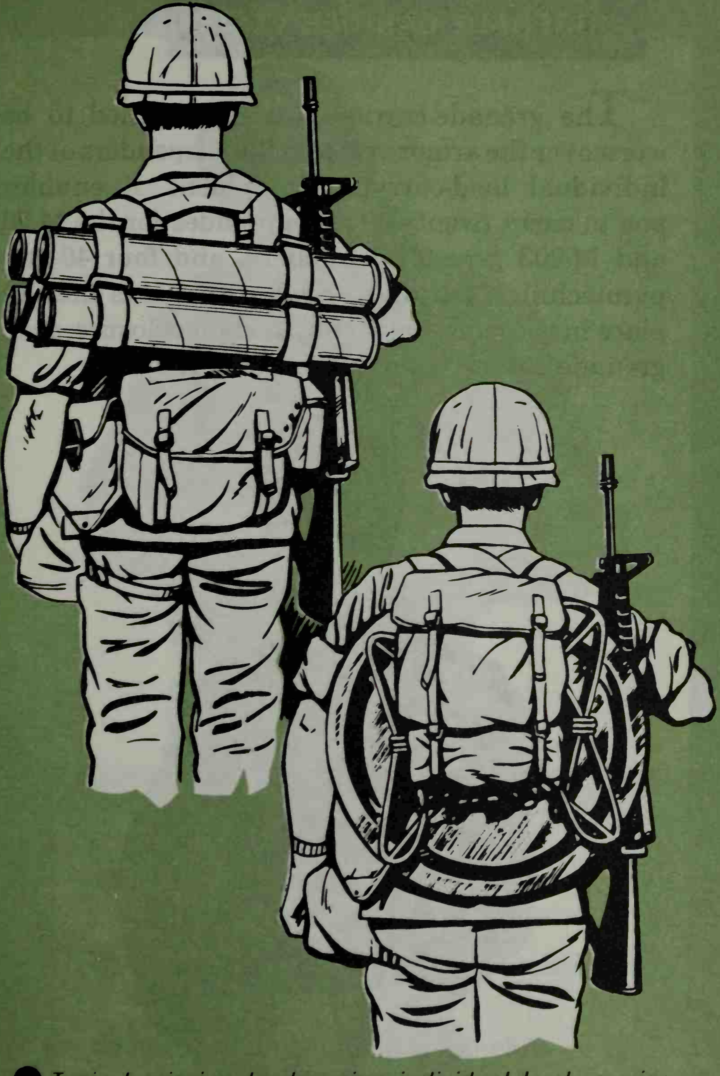
a taut canvas also allows air to circulate between the frame and your back.

■ **Do not drop the packboard;** lay it down gently.

MISSION LOADS

At times it is necessary for you to adjust basic loads and load-carrying equipment to make up for the carry of equipment and supplies required to fulfill your unit mission or to suit your particular assignment. These **mission loads** are carried by using certain combinations of items of either *lightweight load-carrying systems, the universal load-carrying sling, the plywood packboard, the grenade carrier vest, and the various bags.* Typical mission loads, using combinations of the individual load-carrying equipment and the universal load-carrying sling, are illustrated below and on the facing page.

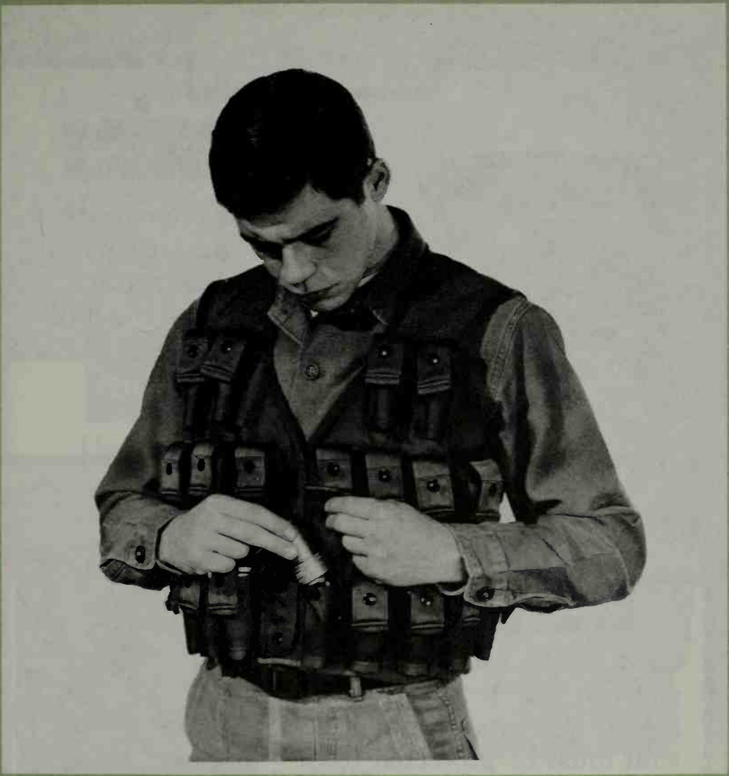




● *Typical mission loads using individual load-carrying equipment and load-carrying sling*

GRENADE-CARRIER VEST

The grenade-carrier vest is designed to be worn over the armor vest and the suspenders of the individual load-carrying equipment. It enables you to carry twenty 40-mm grenades for the M-79 and M-203 grenade launchers, and four 40-mm pyrotechnic cartridges. Each grenade is held in place in the pocket by a snap fastener closure; each grenade can be removed with one hand.

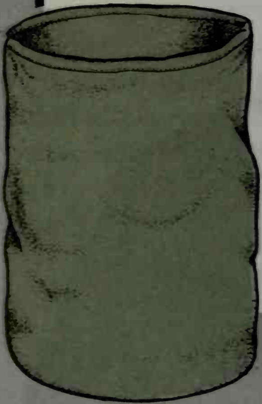


Grenade-Carrier Vest

- If your chest measures from 38 inches or less, wear the small size;
- if it measures from 39 to 42 inches, wear the medium size;
- and if it measures 43 inches or more, wear the large size.

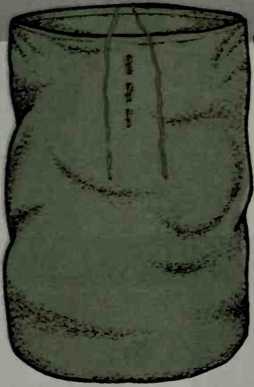
Bags

BARRACKS BAG



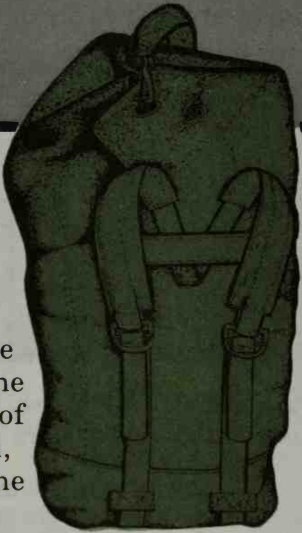
Use the olive drab barracks bag for general storing and carrying purposes. Close the bag with the drawstrings.

CLOTHING BAG



Use the waterproof clothing bag to carry extra clothing, and personal effects that must be protected from moisture, especially during amphibious or jungle operations. **It is not constructed to withstand rough use or handling.** You can also use the bag to carry and store your sleeping bag and blanket. Close the bag by placing the tie cord around the mouth of the bag, inserting the tie cord ends through one of the three attached loops, wrapping the cord, and tying it with a bow knot.

DUFFELBAG



Use the duffelbag, with handle and shoulder straps, in the field to carry your individual clothing and equipment not carried in the field pack or by you. Close the duffelbag by folding the top of the bag in envelope fashion, placing the grommets over the U-shaped keeper, and attaching the snap on the carrying strap to the keeper. Carry the bag by the handle as a suitcase, or by the shoulder straps slung over your shoulders pack-style.

WATERPROOF COVERS

● **Description and Use.** Use the multipurpose waterproof covers (bags) to provide lightweight, waterproof protection for small arms against rain and moisture. The dimensions and uses of the covers are shown in the following table.

Multipurpose waterproof covers

Size designation	Dimensions (inches)	Use
1	8 by 18	For pistol or personal effects.
2	10 by 56	For rifle or carbine.
3	15 by 45	For submachinegun.
4	20 by 84	For machinegun.

● **Additional Uses.** You can use the multipurpose waterproof covers also for—

- Carrying water.
- Protecting miscellaneous small items of clothing and equipment.
- Inflating for lightweight water-crossing operations.
- Lining the duffelbag to form an emergency waterproof clothing bag. For this purpose, use size 3 cover. Cut about 21 inches off the top of the cover to make it a suitable length before you insert it into the duffelbag.

CHAPTER 6

MISCELLANEOUS CLOTHING AND EQUIPMENT

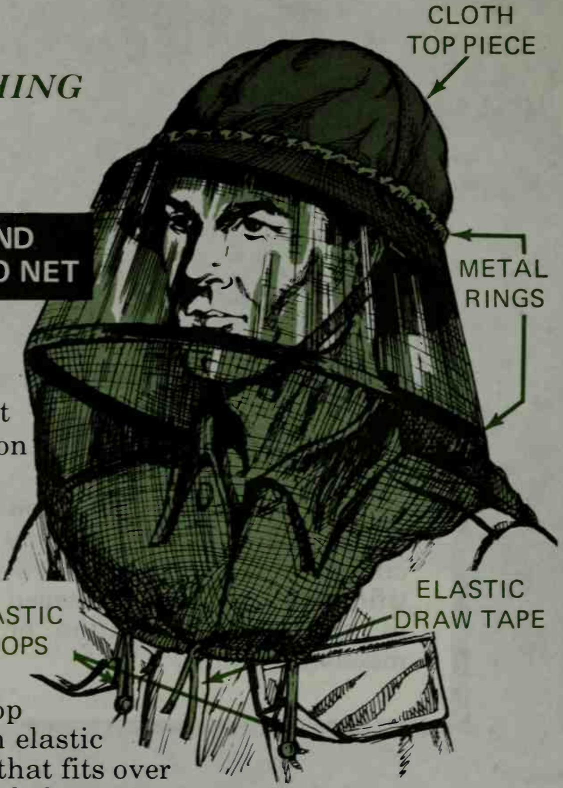
Introduction

The items of clothing and equipment described in this chapter, except for the identification tags, may be issued to you as the situation or mission requires.

CLOTHING

HAT AND MOSQUITO NET

- Wear the hat and mosquito net for protection against mosquitoes and other insects.



The cloth top piece has an elastic suspension that fits over your head or helmet. You may also wear it between the liner and the helmet. Metal rings hold the net away from your face and neck even when sleeping. The hat and mosquito net fits over the collar in back and is held in place in front by two elastic loops that can be attached to the pocket buttons of your shirt. An elastic draw tape at the bottom may be drawn tight when the net is not fastened to the pocket buttons.

KNITTED WOOL SCARF

● The knitted wool scarf is a tubular seamless type with reinforced ends. The scarf ordinarily is used for warmth around the neck, but in emergencies you can use it for other purposes. For example, fold it one and a half times and use it as a cap, or fold it twice and use it as a hand muff.

FIELD PROTECTIVE MASK (M17A1)

● The field protective mask includes the mask, the carrier, and two lens outserts. The mask protects your face, eyes, and respiratory tract against field concentrations of chemical biological (CB) agents, in the form of gases or aerosols, and protects your face and eyes against contamination from splashes and liquid droplets of the agents. The hood protects your head, neck, and shoulders. You will find detailed information on the care and use of the field protective mask and hood in **FM 21-40** and **TM 10-277.**

IDENTIFICATION (ID) TAGS AND NECKLACE

● Wear your ID tags at all times when in the field, when engaged in field training, when traveling in aircraft, and when outside the continental United States. Suspend one tag from your neck underneath the clothing by a 25-inch, noncorrosive, nontoxic, heat-resistant material, looped to form a necklace. Fasten a second tag to the necklace below the first tag by a 2½ inch extension of material similar to that of the necklace.

FIRST AID PACKET

● The first aid packet is a sealed package containing sterilized cotton gauze used for emergency dressing of wounds when medical services are not quickly available. **Do not open the packet until it is needed;** exposure to air may cause the contents to become soiled and nonsterile.

COMPASS

● Use the magnetic lensatic compass to establish direction. An accurate line of direction can be established for a specific object by using the arrangement of a lensatic eyelens, a sight line, and the object being sighted. When you are not using the compass, keep it in its case to protect it from dirt and dust.

WATERPROOF MATCH BOX

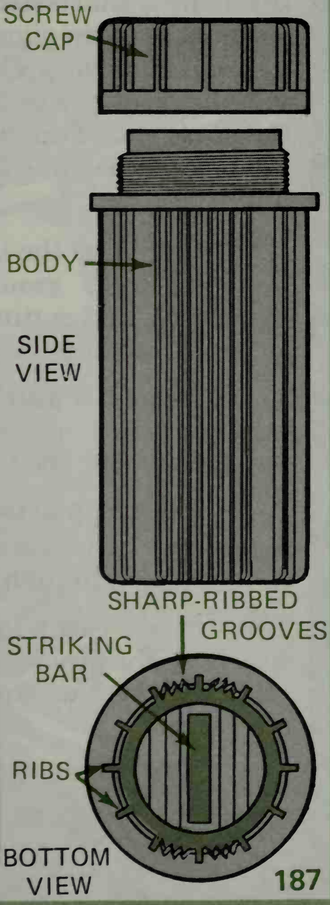
● The waterproof matchbox is a means for keeping matches dry and for starting fires by spark ignition in an emergency.

The box is a small, cylinder-shaped, plastic container with a *screw cap, a striking disk, and a striking bar.*

■ A sealing gasket fits inside the screw cap and provides a tight seal when the cap is screwed finger tight onto the cylinder.

■ The striking disk, which is mounted on the inside top surface of the cap, has an abrasive surface for striking safety matches.

■ The striking bar, located on the bottom of the container, is made of a material that produces a spark when it is struck with the sharp edge of a knife or some other piece of metal.


SCREW CAP
BODY
SIDE VIEW
SHARP-RIBBED GROOVES
STRIKING BAR
RIBS
BOTTOM VIEW

INTRENCHING TOOL

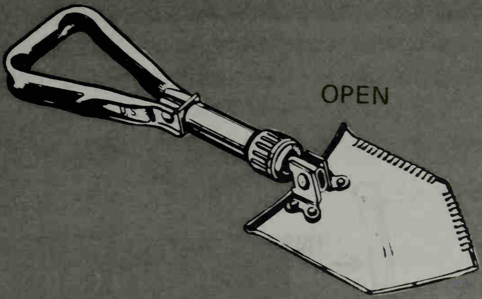
- **Description.** The collapsible intrenching tool is about 9½ inches long when collapsed and about 23½ inches long when fully extended. It has a hollow triangular-shaped handle. One edge of the blade is sharpened for cutting; the other edge is serrated to aid in digging, in addition to serving as a chopping device. The blade can be adjusted into various positions by loosening the locking nut at the blade end of the handle, adjusting the blade to the desired position, and tightening the locking nut.

- **Use.** Use the intrenching tool for digging, breaking hard ground, clearing brush or undergrowth, and cutting roots, saplings, and small trees. **Do not** use it for cutting large-size timber.

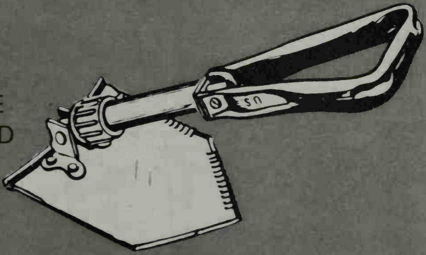
  - **Shoveling or cutting.** Extend the shovel blade outward in a straight-line projection of the handle; tighten the locking nut.

  - **Clearing ground.** Turn the shovel blade to a position perpendicular (upright) to the handle (hoe-shaped); tighten the locking nut.

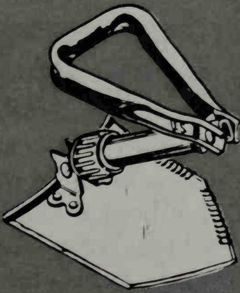
- **Care.** Clean the intrenching tool after each use. Keep the threads on the locking nut clean and oiled so that it will operate easily.



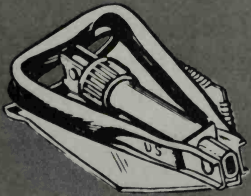
OPEN



BLADE
FOLDED



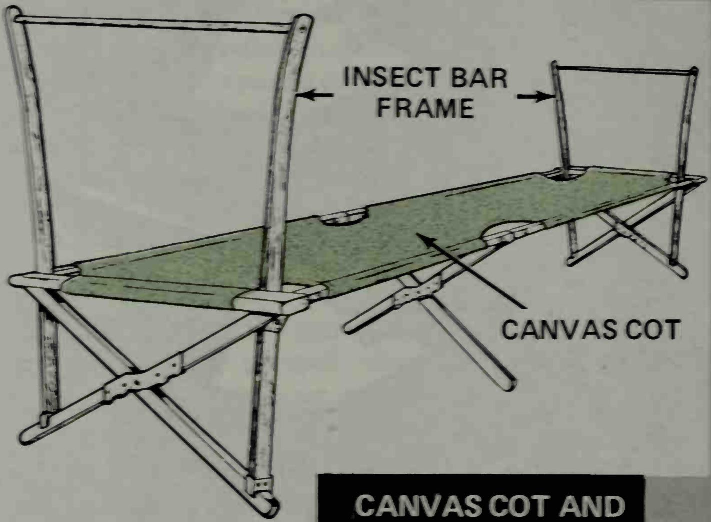
HANDLE
FOLDED



CLOSED

BAG AND CASE-CARRYING SLING

● Use the bag and case-carrying sling as an auxiliary sling to carry the collapsible 2-quart water canteen.



CANVAS COT AND INSECT BAR FRAME

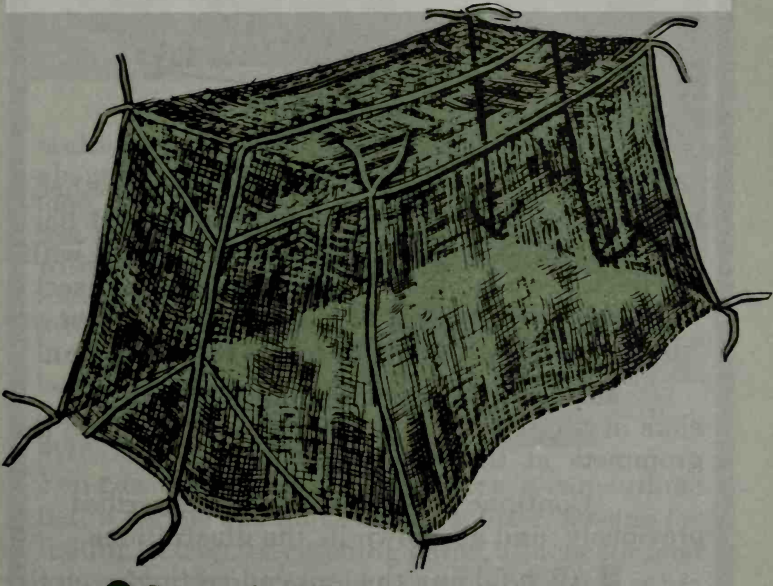
● The collapsible canvas cot has three sets of folding legs. The insect bar frame is made of wood and consists of four upright members which are fitted to the bottom of the end cot legs by means of steel clips. Two crosspieces serve as braces for the uprights. How to use the insect bar frame with the canvas cot is described below.

■ When used with a canvas cot, attach a wooden insect bar frame to each end of the cot, and tie the tie tapes to the top corners of each frame.

■ When used with a metal bed, attach a T-shaped metal frame to each end of the bed, and tie the tie tapes at the top corners of the insect bar to the ends of the crosspieces at the top of each T-shaped frame.

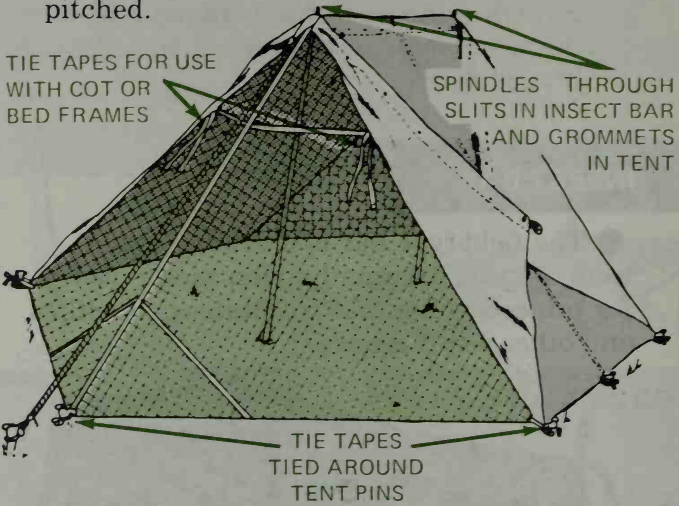
INSECT BAR

● The field-type bar is a canopy made from netting of small nylon mesh; use it for protection against mosquitoes, sandflies, and other small insects.



● *Suspending the bar over the cot or bed.* The insect bar may be suspended over a folding canvas cot or a metal bed.

● *Fastening the bar inside a shelter-half tent.* Fasten the insect bar inside the shelter-half tent while the tent is being pitched.


TIE TAPES FOR USE WITH COT OR BED FRAMES
SPINDLES THROUGH SLITS IN INSECT BAR AND GROMMETS IN TENT
TIE TAPES TIED AROUND TENT PINS

■ Snap fasten the shelter halves together, and place them over the spread-out insect bar so that the footstops of the tent are alined with the tie tapes near the bottom edges of the insect bar, and the grommets at the ridge of the tent are alined with the slits at the top of the insect bar.

■ Place the tentpole spindles through the slots at the top of the insect bar and through the grommets at the ridge of the tent.

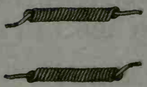
Continue pitching the tent as described previously and as shown in the illustrations.

■ After folding the tent end sections over the sides of the tent, tie the tapes near the bottom edges of the insect bar around the tent pins.

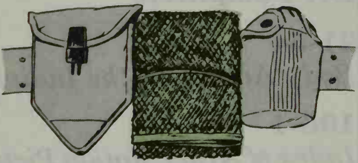
- *Suspending the bar from trees or bushes.* For protection outdoors when a tent is not available, suspend the insect bar by tying the tie tapes at the top corners to trees or bushes.

- *Packing.* Fold the insect bar into a small bundle, and either place it in the field pack or attach it to the pack. It also may be placed in the duffelbag.

MULTIPURPOSE NET



The nylon multipurpose net is about 5 feet wide by 9 feet long. Two cords, about 14 feet long, are included with each net. When folded, the net can be attached to the individual equipment belt in a way similar to that described for the poncho.



You can use the net as a hammock, a camouflage net, a carrier for bulky loads, a litter, a seine for fishing, a trap for catching game, a cache for food or ammunition, a sniper's roost, and many other field expedients. You will find detailed information on the multipurpose net in **TM 10-276.**

APPENDIX A

● REFERENCES

Army Regulations

32-4
Special Measurement Clothing and Footwear and Orthopedic Footwear

606-5
Personnel Identification—Identification Cards, Tags, and Badges

670-5
Uniform and Insignia—Male Personnel

670-30
Uniform and Insignia—Female Personnel

700-84
Logistics—Issue and Sale of Personal Clothing

DA Pamphlets

21-54
Body Armor for the Individual Soldier

108-1
Index of Army Motion Pictures and Related Audio-Visual Aids

310-1
Index of Administrative Publications

310-2
Index of Blank Forms

310-3
Index of Doctrinal, Training, and Organization Publications

310-4
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders

DA Training Circular

21-3
Soldier's Handbook for Individual Operations and Survival in Cold Weather Areas

Field Manuals

21-5
Military Training Management

21-11
First Aid for Soldiers

21-13
The Soldier's Guide

21-18
Foot Marches

21-40
Chemical, Biological, Radiological, and Nuclear Defense

21-411 *Soldier's Handbook for Defense Against Chemical and Biological Operations and Nuclear Warfare*

Field Manuals

21-75
Combat Training of the Individual Soldier and Patrolling

22-5
Drill and Ceremonies

22-6
Guard Duty

Technical Manuals

9-1300-200
Ammunition, General

10-227
Fitting of Men's Uniforms

10-228
Fitting of Footwear

10-229
Fitting of Uniforms for Army Women

10-267
General Repair for Clothing and Textiles

10-268
General Repair of Footwear and Leather Goods

10-275
Cold Weather Clothing and Sleeping Equipment

10-276
Hot Weather Clothing and Equipment

10-277
Protective Clothing—-Chemical Operations

10-354
Army Fixed Laundry Organization

10-8400-201-23
Organizational and Direct Support Maintenance Manual: General Repair Procedures for Clothing and Individual Equipment

10-8465-202-23
Organizational and Field (Third Echelon) Maintenance Manual: Packboard, Plywood, FSN 8465-255-8223

57-220
Technical Training of Parachutists

Technical Bulletin

QM 13
Clothing, Equipment, and Rations for Use in the Jungle

Common Tables of Allowances

50-900
Clothing and Individual Equipment (Active Army, Reserve Components, and DA Civilian Employees)

Training Films (TF)

10-2430
Fitting Army Uniforms and Footwear—Fitting of Footwear

10-3092
Individual Load Carrying Equipment

10-3593
Individual Load Carrying System—Variations of Use

10-4223
Hot Weather Clothing and Equipment

10-4352
Fitting of Army Uniforms

APPENDIX B

● COMPOSITION OF UNIFORMS

ENLISTED MEN

ITEM	ARMY GREEN	ARMY TAN	ARMY KHAKI	UTILITY UNIFORM	UTILITY UNIFORM (WINTER)
Belt, waist	●	●	●	●	●
Boot, combat	●	●	●	●	●
Cap, utility, cotton, poplin, OG 106					●
Cap, garrison, army green	●	●	●		
Cap, service, army green	●	●	●		
Coat, army green	●				
Coat, cotton OG 107					●
Gloves, black	●				
Necktie, four-in-hand black	●				
Overcoat, army green	●				
Overcoat, OG 107	●				
Overcoat, taupe	●				
Overshoes	●	●	●		
Poncho				●	●
Raincoat	●	●	●	●	●
Scarf, army green	●				
Shirt, army shade 446 or 46	●				

ITEM	ARMY GREEN	ARMY TAN	ARMY KHAKI	UTILITY UNIFORM	UTILITY UNIFORM (WINTER)
Shirt, army tan	●				
Shirt, army khaki			●		
Shirt, utility, OG507, durable press				●	
Shirt, short sleeve, army khaki			●		
Shirt, men's, short sleeve, polyester/cotton, Army tan 445, durable press		●			
Shirt, wool, OG 108					●
Shoes, low quarter	●	●	●		
Socks, dress, black	●	●	●		
Socks, wool, black, cushion sole				●	●
Sweater, AG shade 12	● *				
Trousers, army green	●				
Trousers, army khaki			●		
Trousers, men's, polyester/cotton, Army tan 445, durable press		●			
Trousers, utility, OG507, durable press				●	
Trousers, serge, OG					●

**Authorized for optional purchase and wear as an outer garment with the Army green trousers inside buildings, and as a subgarment worn under the Army green coat.*

● *COMPOSITION OF UNIFORMS* (CONTINUED)

ENLISTED WOMEN

ITEM	ARMY GREEN	ARMY GREEN CORD	HOSPITAL DUTY	TRAINING/ DUTY
Anklets, black, cotton				●
Anklets, white, cotton				●
Beret, black				●
Blouse, white	●			
Cap, garrison, AG	●	●	●[1]	●
Cap, garrison, AG Cord		●	●[2]	●[2]
Cap, nurse, white			●	
Coat, AG	●			
Coat, AG Cord		●		
Dress, summer, with jacket	●[2]	●		
Dress, white			●	
Gloves, white service	●[2]	●	●[2]	●[2]
Gloves, leather, black	●[1]		●[1]	●[1]
Handbag, black, service, leather	●	●	●	●
Handbag, polyurethane, black	●	●	●	●
Hat, AG	●	●		
Jacket, women's, gabardine, AG344 (pantsuit)	●	●		

APPENDIX C

●*TEMPERATE ZONE (HOT WEATHER) FIGHTING AND EXISTENCE LOAD ITEMS (TYPICAL)*

*1. Fighting Load Items**

a. Clothing:	***Approximate weight (pounds)***
(1) Helmet w/liner	*3.44*
(2) Trousers and jacket, utility	*2.26*
(3) Underwear (summer) and socks	*.60*
(4) Boots, leather (DMS)	*3.36*
(5) Poncho (lightweight)	*1.70*
(6) Belt, waist, web w/buckle	*.20*
Total	*11.56*

b. Equipment:	
(1) Rifle, M16, w/sling and 1 magazine (30 rounds)	*7.91*
(2) Ammunition (180 rounds) and magazines (6 each)	*6.21*
(3) Ammunition cases (2 each)	*.86*
(4) Handgrenades (2 each)	*2.00*
(5) Smoke grenades (2 each)	*3.00*
(6) Canteen (filled) w/cup and cover	*3.60*
(7) Water purification tablets	*.06*

(8) Individual equipment belt, first aid packet w/case, and suspenders	*1.59*
(9) Intrenching tool w/carrier	*2.52*
(10) Bayonet-knife, M7, and scabbard, M8A1	*1.30*
Total	*29.05*

c. Rations:

(1) Meal w/spoon	*1.75*

**Items included in the fighting load will be determined by mission, and environmental conditions.*

FIGHTING AND EXISTENCE LOAD ITEMS (TYPICAL)

*2. Existence Load Items**

a. Armor vest	*9.30*
b. Mask, CBR, protective, 17A1 w/carrier	*2.97*
c. Suit, chemical protective, w/gloves and hood	*3.78*
d. Liner, poncho	*1.60*
e. Cap, utility	*.22*
f. Frame, pack, including lower back, shoulder, and waist straps	*3.10*
g. Pack, medium, combat, field	*2.46*
h. Pack, large, combat, field	*2.86*
i. Cover, field pack, camouflage	*.82*
j. Shelf, cargo support	*.44*
k. Shelter half, with 5 pins, aluminum poles, and rope	*4.45*

l. Strap, cargo tiedown (2 each)	*.40*
m. Sleeping bag, intermediate cold	*7.50*
n. Sleeping bag, extreme cold	*9.50*
o. Mattress, pneumatic, insulated	*3.50*
p. Hood, sleeping	*.10*
q. Shirt, sleeping	*.65*
r. Bag, waterproof	*.75*
Total	*54.4*

**Items included in existence loads will be determined by the mission, terrain, and environmental conditions.*

APPENDIX D

● STAIN REMOVAL GUIDE

Most stains can be classified into eight groups. All the stains in each group can be removed by the same procedure. Removal methods include those for washable and nonwashable fabrics. The guide also lists the solvents and chemicals used and where they may be obtained. Certain items may be available only on a commercial basis.

GROUP I

(Fats, oils, waxes, grease, and in some cases, pigment or dye.)

- Adhesive tape
- Crayon
- Furniture polish
- Grease
- Hair spray
- Ink: India
  - Felt tip marker
  - Typewriter ribbon
- Insecticides
- Margarine
- Nose drops
- Oil
- Ointment
- Paint: Solvent base
  - Water emulsion
- Putty
- Shoe dye
- Shoe polish
- Smoke
- Soot
- Tar
- Wax: Car
  - Floor
  - Furniture

GROUP I

Removal Method	
Washable Fabrics	*Nonwashable Fabrics*
Sponge with drycleaning solvent, apply dry spotter and rub gently. Flush with dry solvent. If stain remains, repeat above procedure. Dry. Sponge with water, apply wet spotter and ammonia. Rub or tamp gently with brush. Rinse with water. Launder.	Same as for washable fabrics, but do not launder.

GROUP II

(Albuminous and starchy materials and certain foods)

- Aftershave lotion
- Blood
- Body discharge
- Chili sauce
- Chocolate
- Cocoa
- Cream
- Egg
- Eye drops
- Fish slime
- Gravy
- Ketchup
- Ice cream
- Mayonnaise
- Milk
- Mouthwash
- Mucus
- Pudding
- Salad dressing
- Sauces
- Sherbet
- Soups
- Starch
- Vomit

GROUP II (Continued)

Removal Method	
Washable Fabrics	*Nonwashable Fabrics*
Soak in water solution of detergent and ammonia (approximately 1 ounce per gallon of water). Rinse with clear water. Soak in water solution of an enzyme product for 30 minutes. Launder. Repeat if stain remains.	Sponge with water. Apply wet spotter and ammonia. Rub into stain. Rinse with water. Add an enzyme product and keep area moist for 30 minutes. Flush with water. Repeat if stain remains.

GROUP III

(Plastic and, in some cases, pigment or dye)

- Airplane glue
- Carbon paper
- Corn removers
- Correction fluid (mimeograph)
- Household cement
- Lacquer
- Mimeograph ink
- Mucilage
- Liquid solder
- Plastic
- Plastic glue
- Typewriter ribbon
- Varnish

Removal Method	
Washable Fabrics	***Nonwashable Fabrics***
Sponge with drycleaning solvent, apply dry spotter and rub gently. Tamp gently with brush after adding more dry spotter. Flush with dry solvent. Dry. If stain remains, repeat above procedure. Dry. Apply amyl acetate and rub or blot. Keep moist with amyl acetate for 15 minutes with occasional blotting. Flush with dry solvent. Dry.	Same as for washable fabrics.

GROUP IV

(Tannin, reducing sugars, and vegetable coloring materials)

- Beer
- Berry
- Caramelized sugar
- Casein glue
- Coffee
- Cordials
- Cough sirup
- Fruit
- Molasses
- Mouthwash
- Mud
- Shaving cream
- Sirup
- Soft drinks
- Tea
- Tobacco
- Toothpaste
- Vegetables
- Vinegar (colored)
- Whisky
- Wine

Removal Method	
Washable Fabrics	***Nonwashable Fabrics***
Soak in a water solution of detergent and vinegar (approximately 1 ounce per gallon of water). Rinse. Sponge with alcohol. Launder. If stain remains, soak in water solution of an enzyme product 30 minutes. Rinse and launder.	Sponge with water. Apply wet spotter and vinegar. Rub into stain. Rinse with water. Apply alcohol and rub into stain. Dry. If stain remains, apply an enzyme product and keep area wet for 30 minutes. Rinse with water. Dry.

GROUP V

(Red dyes, deodorants, perspiration, and urine)

- Antiperspirants
- Candy
- Deodorants
- Dye: Clothing
  Food
- Mercurochrome
- Merthiolate
- Methaphen
- Perspiration
- Picric acid
- Red ink
- Urine
- Watercolor paint

Removal Method	
Washable Fabrics	***Nonwashable Fabrics***
Soak 1 hour in a water solution of detergent and ammonia (approximately 1 ounce per gallon of water). Rinse with water. Soak 1 hour in a water solution of vinegar (approximately 1 ounce per gallon of water). Rinse and dry. Apply alcohol and rub gently. Rinse with water. Launder.	Sponge with water. Apply wet spotter and ammonia. Blot stain with spotting paper. Keep area wet for 30 minutes with occasional rubbing. Rinse with water. Apply wet spotter and vinegar. Rub gently. Rinse and dry. Apply alcohol and rub gently. Rinse with water. Dry.

GROUP VI

(Blue, black, green, and violet dyes)

- Bluing
- Dye: Clothing
  - Food
  - Shoe
- Gential Violet
- Ink: Green
  - Violet
  - Blue
  - Black
- Watercolor paint

Removal Method	
Washable Fabrics	***Nonwashable Fabrics***
Soak 30 minutes in a water solution of detergent and vinegar (approximately 1 ounce per gallon of water). Rinse with water and dry. Apply alcohol and rub gently. Dry. Soak 30 minutes in a water solution of detergent and ammonia (approximately 1 ounce per gallon of water). Launder.	Sponge with water. Apply wet spotter and vinegar. Blot with blotting paper. Keep area wet for 30 minutes and blot occasionally. Flush with water and dry. Apply alcohol and rub gently. Dry. Sponge with water. Apply wet spotter and ammonia. Keep area wet 30 minutes and blot occasionally. Flush area with water. Dry.

GROUP VII

(Oxidizing oils, rubber cement, and gum)

- Asphalt
- Butter
- Chewing gum
- Corn oil
- Linseed oil
- Rubber cement
- Vegetable oil

Removal Method	
Washable Fabrics	*Nonwashable Fabrics*
Apply drycleaning solvent and dry spotter. Rub or tamp gently with brush. Keep area wet with dry solvent and dry spotter for 30 minutes with occasional rubbing. Rinse with dry solvent. Dry.	*Same as for washable fabrics.*

GROUP VIII

(Iodine, penicillin, and silver salts)

- Argyrol *
- Iodine **
- Penicillin
- Photo development fluid
- Silver nitrate

**Use enzyme product first.*

***Do not use iodine in removal method.*

Removal Method	
Washable Fabrics	***Nonwashable Fabrics***
Sponge area with water, add a few drops of iodine.* Add a few drops of Hypo solution and a few drops of ammonia. Flush well with water. Launder.	Same as for washable fabrics, but do not launder.
**Do not use iodine if the stain is iodine.*	

AVAILABILITY OF SOLVENTS AND CHEMICALS

1. **Alcohol** *(denatured or rubbing alcohol)*
   - Available in grocery and drug stores.

2. **Ammonia** *(10 percent solution)*
   - Available in drug stores or household ammonia.

3. **Amyl acetate** *(chemically pure)*
   - Available in drug and hardware stores.

4. **Coconut oil**
   - Available in drug stores and chemical supply companies.

5. **Detergent**
   - Available in grocery and drug stores.

6. **Dry solvent**
   - Available in grocery, drug, and department stores.

7. **Dry spotter** *(1 part coconut oil mixed with 9 parts dry solvent)*
   - Items available in grocery, drug, and department stores.

8. **Enzyme product**
   - Available in grocery stores.

9. **Glycerine**
   - Available in drug stores. Mix 1 part glycerine to 1 part water for use.

10. **Hypo (sodium thisulfate)**
    - Available in drug stores.

AVAILABILITY OF SOLVENTS AND CHEMICALS

(Continued)

11. Iodine

●Available in drug stores.

12. Water

13. Wet spotter *(1 part detergent, 1 part glycerine, 8 parts water)*

●Items available in grocery and drug stores.

14. Vinegar

●Available in grocery stores.

FM 21-15

15 FEBRUARY 1977

By Order of the Secretary of the Army:

BERNARD W. ROGERS
General, United States Army
Chief of Staff

Official:

PAUL T. SMITH
Major General, United States Army
The Adjutant General

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